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AMERICAN JOURNAL OF PSYCHIATRY

MENTAL PHENOMENA OBSERVED IN CASES OF BRAIN TUMOR.*

BY GEORGE W. HENRY, M.D.

Many studies of the mental phenomena associated with brain tumor have already been presented and it might appear that this subject had been fairly well exhausted. Closer inspection shows that there have been many isolated observations, that conclusions have been drawn from the study of a small number of cases or that attempts have been made to correlate certain psychotic reaction types with the presence of brain tumor.

According to the various authoritative estimates mental disturbances accompany brain tumor in 40 to 100 per cent of the cases. Such great discrepancies are of course dependent upon the interpretation of the phenomena observed rather than upon inaccuracies in observation. I have tried to obviate this difficulty by presenting the facts in such a way that the reader may draw his own conclusions. In order to study more closely certain aspects of brain tumors I have made use of the general plan of mental examination employed by psychiatrists but under each topic are included observations made over periods of weeks and months.

In addition to an original study of 26 cases of brain tumor in psychotic patients[1] the material for this paper was obtained from more than 1000 cases found in the literature. All of these cases were verified by autopsy or by operation and only those were selected

* Read at the eighty-eighth annual meeting of The American Psychiatric Association, Philadelphia, Pa., May 31–June 3, 1932.

[1] Jameison, G. R., and Henry, G. W.: Mental Aspects of Brain Tumors in Psychotic Patients (to be published).

which were reported in sufficient detail to be of value in a psychiatric study. No attempt was made to deal with the purely neurological aspects of these cases as the purpose of this study was to determine to what extent the psychiatrist might aid in the diagnosis and the localization of brain tumors.

Incidentally some additional information regarding the correlation of brain structure and function may have been obtained as well as some clues as to the relation of changes in brain physiology to personality disorders. Practically any kind of functional illness may be simulated and each case provides an opportunity to study the changing adaptation of a certain type of personality to the gradual distortion and elimination of brain function.

The observations made on the more general symptoms such as headache, nausea, vomiting and vertigo as well as special studies of aphasia and astereognosis in cases of brain tumor will be presented at some other time. In the subsequent pages are reported the phenomena which are of interest to the psychiatrist and which he might note in brain tumor cases by applying his special technique of observation.

General Behavior.

Wide variations in psychomotor activity are observed according to the location of the tumor, the rapidity of its growth and the stage of the illness. In the early stages irritability, restlessness and aggressive tendencies are fairly commonly observed. The patient may have vague feelings of discomfort or actual pain in his head or in other parts of his body. He may be tense, impatient and subject to outbursts of anger or even violence.

As intracranial tension increases restlessness may be succeeded by general overactivity and together with neoplastic destruction of the brain there may be an active delirious state. The patient is then quite excited and sometimes destructive. He does such things as tearing bed clothing and tying the fragments to the bed in a fantastic manner. Sometimes a childish playfulness is observed and occasionally the behavior suggests a manic attack.[2] Serious disturbance in function of the frontal lobes directly through the growth

[2] Cordes, F.: Manieartige Geistesstörungen bei Hirntumor. Ztsch. f. d. ges. Neur. u. Psychiat., 15: 205.

of the tumor or indirectly through intracranial hypertension often leads to behavior such as is shown by the general paretic.

This excited phase may be of short duration or may dominate the clinical picture for weeks or months. It is usually succeeded by an opposite phase in which general psychomotor activity is retarded. The patient even though not depressed may have to make an unusual effort in order to perform the ordinary daily tasks.

This retardation closely resembles the hypokinetic states observed in disease of the extra-pyramidal system. There is not only delay in initiating psychomotor activity but it is also continued in a slow laborious manner. It is often only partially completed as though stimuli were not sufficient to overcome the neuro-muscular inertia.

During the later stages of the illness excited, overactive periods may alternate with those in which the behavior is slow and hesitating. This succession of events is apparently due to changes in intracranial tension.

In addition to these extremes in psychomotor activity somewhat resembling those of manic-depressive psychoses a large proportion of brain tumor cases suggest catatonia, paralysis agitans[3] or a post-encephalitic parkinsonian syndrome.[4] Such a clinical picture is usually associated with tumors in the region of the third ventricle in which the pituitary gland and particularly the basal ganglia are involved. These manifestations have been observed in a few cases of frontal and corpus callosum tumors but the basal ganglia also were involved either by pressure or by the tumor growth itself.

[3] Schuster, P.: Kann ein Stirnhirntumor das Bild der Paralysis Agitans hervorrufen? Ztsch. f. d. ges. Neur. u. Psychiat. 77: 1.

[4] Bogaert, L.: The Thalamic and Parkinsonian Types of Infundibular Tumors. Arch. Neur. and Psychiat. 19: 377.

McClements, S.: Tumor of Brain Simulating Encephalitis Lethargica. Brit. Med. Jour., 1928,[1] p. 1061.

Bassoe, P.: A Case of Third Ventricle Tumor Mistaken for Lethargic Encephalitis. Arch. Neur. and Psychiat., 4: 118.

Parker, H. L.: Tumors of the Brain Simulating Epidemic Encephalitis and Involving the Third Ventricle, the Fourth Ventricle and the Basal Ganglia. Jour. Nerv. and Ment. Dis., 58: 1.

Kaiser, O.: Dementia Præcox oder Gehirntumor? Allg. Ztsch. f. Psychiat., 62: 92.

In the catatonic or parkinsonian cases the patient is usually seclusive, resistive, sits in one position for hours, has a mask-like face, may be mute, may refuse to eat or may hold food in his mouth a long time and he may even drool saliva. His posture is usually rigid and he may keep his fist constantly clenched. He may refuse to urinate but more often he is incontinent and soils himself. At times he behaves in an impulsive excited manner but as a rule there are few spontaneous movements. He frequently presents superficial tremors or spasmodic twitchings and he walks bent forward and sometimes with a propulsive gait. This condition varies in degree and may last for weeks or months. It is often complicated by a somnolent state and may be followed by a confused, euphoric state or by stupor. As a rule akinetic phenomena are observed whenever a large area is destroyed or when the intracranial tension is maximum.

One of the most striking manifestations of brain tumor is somnolence. It is present in at least 50 per cent of the cases especially during the latter part of the illness and regardless of the location of the tumor. It is more frequently observed and is more pronounced with tumors in the base of the brain. The average time before death at which somnolence first appeared varied according to the location of the tumor as follows: pineal 17 months, corpora quadrigeminal 10 months, third ventricle 11 months and pituitary 8 months. The average time for the appearance of this symptom when the tumor was located in other parts of the brain was only 4 months. In view of the fact that basal tumors readily obstruct the cerebrospinal fluid circulation, and since tumors in other regions do not give rise to somnolence until they are considerably larger it appears that intracranial hypertension is at least the chief factor in the causation of this state. Additional evidence of this relationship is found in the fact that somnolence is promptly relieved by decompression operations and does not occur in cases of cerebrospinal rhinorrhea so long as the flow is not stopped.

This somnolence may be one of the first symptoms or it may not appear until the disease is well advanced. It sometimes resembles normal sleep, but usually the patient behaves as though he were excessively fatigued and he falls asleep as soon as external stimu-

lation ceases. The tendency to sleep is overwhelming. The patient may repeatedly fall asleep during the physician's examination, a conversation, eating or while riding in an automobile. He may be talking, start to yawn, repeat the same phrase several times and then fall asleep. He may be aroused sufficiently to answer a question and promptly return to sleep. Sometimes the patient must be kept in bed so that he will not fall on the floor asleep. In extreme cases drowsiness and yawning may be accompanied by persistent rubbing of the nose.

The duration of the somnolent state varies greatly. It is sometimes preceded by a period of sleeplessness and occasionally the patient is sleepless at night and somnolent during the day. Some patients have attacks of drowsiness several times per day, each attack lasting 15 to 20 minutes. These attacks may be preceded by a short interval of disorientation. Not uncommonly the patient is drowsy or asleep for several days or weeks at a time and one case is reported in which sleep persisted for seven months.

Syncopal attacks and explosive motor phenomena are among the most common manifestations of brain tumor. Sudden loss of consciousness, uncinate gyrus seizures, Jacksonian or general epileptiform attacks occurred in about 40 per cent of the cases. These symptoms appeared on an average of three to four years before death and one patient had general convulsive seizures for 20 years before he died of brain tumor. On the other hand convulsive phenomena may not appear until a short time before death. As a rule the convulsive attacks become more frequent and are more severe as the disease progresses. These attacks apparently are not dependent upon the location of the tumor and probably are in part an expression of intracranial hypertension. They have no special localizing value except when they are of the Jacksonian type. The uncinate gyrus attacks first described by Hughlings Jackson and consisting of epileptiform seizures preceded by horrible smells and nasty tastes strongly suggest a lesion of the temporosphenoidal lobe. Headache and even hemicrania are so frequently associated with convulsive attacks that it is difficult to determine what the relation may be, but there have been some cases reported in which

migraine preceded Jacksonian epilepsy.[5] Occasionally these localized fits were chiefly sensory in nature.[6]

Among the more unusual phenomena observed in cases of brain tumor are peculiar involuntary grasping movements. A light stroke across the palm of the hand or merely touching the palm causes the fingers to make a slow grasping movement. The observer's finger may then be firmly grasped and if an attempt is made to withdraw the finger it is automatically held more tightly. This involuntary closing of the hand may persist for 40 seconds in spite of the patient's efforts to relax. It has been found to be associated with frontal lobe tumors and the hand on the opposite side is affected.[7]

This involuntary grasping reflex apparently is related to apraxia and perseveration. Apraxia was noted chiefly with tumors of the left temporal lobe and is probably closely associated with those complex disorders giving rise to aphasia. Perseveration on the other hand seems to be a more general symptom since it is found with tumors in various parts of the brain and usually when a large area of the brain had been destroyed.[8]

Perseveration occurs both when a new act is requested and also when the patient is asked to stop any given act. If a series of different questions are asked the response to the first question may be repeated in answer to the succeeding questions. The patient in shaking hands is unable to relax his grip. If asked to write his name he may get started with one or two letters and then repeat these indefinitely. He may understand quite well the meaning of the request and may realize that he is not responding correctly and still be unable to modify the perseverated activity. Perseveration may also be complicated by a certain amount of confusion. One patient with a corpus callosum tumor extending into both frontal lobes sat one evening before a wash bowl for a half hour turning

[5] Baruk, H.: Migraines d'apparence psychogenique suivies d'épilepsie Jacksonienne dans un cas d'agiome cérébral. L'Encéphale, 26: 44.

[6] Sittig, O.: A Clinical Study of Sensory Jacksonian Fits. Brain, 48: 233.

[7] Adie, W. J., and Critchley, M.: Forced Grasping and Groping. Brain, 50: 142.

[8] Wilson, S. A. K., and Walshe, F. M. R.: The Phenomenon of "Tonic Innervation" and Its Relation to Motor Apraxia. Brain, 37: 199.

the faucets on and off. When asked why he did so he responded: "I am doing this a hundred times to apply the principle of ¾ inch boards."

Astereognosis although a somewhat neglected symptom in recent years seems to have considerable value in the localization of brain tumors. This symptom may be associated with lesions in the pathways leading from the periphery to the parietal lobes. Occasionally it is found with tumors in other parts of the brain but it was most frequently associated with tumors of the parietal lobe. It may appear as the first symptom or at any time during the course of the illness. Occasionally it disappears but usually it becomes more definite and more fully developed as the disease progresses.

When astereognosis is cortical in its origin the patient is not only unable to recognize the shape and nature of familiar objects with the hand contralateral to the lesion but he also retains no memory of their size, shape or form. A patient with a tumor in a parietal lobe made mistakes in picking up his pen. His fingers would grasp at it but would go to either side of it. When about to help himself to butter he put his fingers instead of the knife into the butter. Somewhat later he was unable to recognize any objects placed in his right hand. A sarcoma was found in the left parietal lobe.

Probably the most obvious form of incoordination is found in the gait of patients having cerebellar tumors. It is described as drunken, staggering or reeling. There is a tendency to stagger towards the side of the lesion. The patient is fully aware of this tendency and tries to overcome it but it seems as though something beyond his control is pulling him over.[9] Occasionally this kind of an ataxic gait is found to be associated with tumors in other regions and especially in well advanced tumors of the third ventricle. The extent to which the gait in such cases may be misleading is illustrated by the fact that one patient with an extensive tumor at the base of the brain was arrested for public intoxication.

The position of the head has been commented upon by several observers. In many cases of unilateral cerebellar and also in extracerebellar tumors the head is kept slightly flexed to the side of the lesion with the chin directed towards the opposite shoulder. It was

[9] Stewart, T. G., and Holmes, G.: Symptomatology of Cerebellar Tumors. Brain, 27: 522.

noted however that this attitude was neither constant nor pathognomonic. Stenvers[10] has found that in cases of supratentorial tumor the patient moves his head backward so that the ventricular fluid can more easily flow out of the third ventricle. In contrast to this the patient with a subtentorial tumor tends to keep his head forward in order to enlarge the communication with the fourth ventricle, but tumors in the posterior fossa which grow towards the aqueduct sometimes cause retraction of the head.

In this study a certain position of the head or the body was preferred in about 5 per cent of the cases. The explanation for this obtained from the patient was that the position assumed tended to relieve pain. The head was drawn backward or forward or to either side in different cases as a rule in accordance with Stenvers' principle. One patient with a left cerebellar tumor was usually found with his head bowed on his chest while another with a tumor of the vermis occluding the aqueduct would throw his head backward and to the left while having sudden violent pain. Sometimes the characteristic position assumed is in relation to pain only. In one case of pituitary tumor the patient during paroxysms of pain would throw his head backward and look up in agony. Not uncommonly a patient will persist in lying on the right or the left side and resist being turned over.

The behavior of some patients even though psychotic could scarcely escape the attention of a keen observer. Among a group of 26 psychotic patients studied several directed attention to the head by wearing handkerchiefs or cloths on top of the head and one woman kept her head covered with her skirt. Occasionally such a patient will sit with his head resting on a table or buried in his hands. Others were observed applying cold compresses to the head or frequently bathing the head or holding it under running water. One patient persisted in rubbing butter and grease into her hair. Such mute evidence of distress in the head of course requires further investigation.

Choreo-athetoid movements, rigidity, tremors, tonic and clonic convulsions, hemiparesis and involuntary laughing and crying

[10] Stenvers, H. W.: Position of the Head in Cerebral Tumors Above and Below the Tentorium. Arch. Neur. and Psychiat., 13:711.

strongly suggest a basal ganglia tumor.[11] One patient with a tumor filling the third ventricle frequently patted his head and at the same time emitted queer sounds resembling the cry of a wounded animal. Another patient with a tumor destroying most of the optic thalamus was conspicuous because of involuntary howling.[12]

Grinding of the teeth especially during sleep probably escaped the attention of most of the observers but it was mentioned in a few cases of frontal tumor and in one case in which the tumor was situated in the parietal lobe. Since this symptom is also observed in cases of general paresis it is probable that it has some localizing value. On the other hand Knapp[13] has associated grinding of the teeth with tumors in the posterior cranial fossa.

Whatever the site of the tumor may be prolonged intracranial hypertension and neoplastic destruction of the brain inevitably lead to some degree of organic dementia. This dementia is usually progressive but even this manifestation of tumor growth varies considerably with changes in intracranial pressure. As a rule regressive changes are most conspicuous with frontal and corpus callosum tumors and especially in those cases in which the clinical picture suggests general paresis. One of these patients four months before his death made elaborate but highly impractical plans for building a bicycle house behind his own residence. He also began to show very poor judgment in business, ordering coal for other people and selling produce in a reckless manner. A clergyman after several months of severe bilateral fronto-temporal headaches began to preach in an incoherent manner and merely stumbled through his sermons. He was usually unconcerned about this but was immensely pleased with his last sermon which was an utter failure. Two months later he was sitting about in a disinterested manner and unable to carry on a conversation because of poor memory and an apparent inability to comprehend what he was trying to say. He had become careless of his personal appearance and habits and did such things as urinating in his slipper.

[11] Ody, F.: Tumors of the Basal Ganglia. Arch. Neur. and Psychiat., 27: 249.

[12] Weisenburg, T. H., and Guilfoyle, W. F.: Tumor Destroying Most of the Optic Thalamus, etc. Rev. Neurol. and Psychiat., 8: 325.

[13] Knapp, A.: Die Tumoren des Schläfenlappens. Deutsche Ztschr. f. d. ges. Neur. u. Psychiat., 43: 226.

It is difficult to arrive at any conclusions as to the influence of the tumor in bringing about a state of indifference as to personal habits in those patients who have had a chronic psychosis before the onset of tumor symptoms. In non-psychotic cases incontinence of urine usually appears a short time before the patient begins to soil himself. Occasionally soiling was observed as long as a year before death but as a rule it did not appear until about two months before the end. It was most common in third ventricle, corpus callosum, temporal and frontal tumors.

In a study of frontal and temporal lobe tumors Kolodny [14] found that incontinence was a much earlier symptom with frontal lobe tumors. It was present in 60 per cent of these cases but he found it in only 20 per cent of the temporal lobe tumors. He also observed that patients with temporal tumors were usually ignorant of the incontinence, while those with frontal tumors seemed to have a realization of the incontinence but were indifferent.

A typical illustration of the change which takes place is found in a patient who four months before his death lost all interest in his work and was content to play with his children or merely to sit at home. Two months later he was wetting and soiling himself. When questioned about this he said that he knew he should not soil himself but that he could not help it. He was found to have a huge glioma in the anterior portion of the corpus callosum extending into both frontal lobes.

Speech.

The linguistic manifestations of brain tumors are determined in large part by the kind and degree of physical distress, the prevailing mood, the degree of orientation to reality, the extent to which memory may be impaired and the capacity to appreciate the nature and seriousness of the illness.

In the early stages the patient may complain in a neurasthenic, anxious, hypochondriacal or hysterical manner in much the same way as though the illness were purely functional. The keen observer will often notice however that some of the symptoms appear to be genuine expressions of organic disease rather than manifesta-

[14] Kolodny, A.: The Symptomatology of Tumors of the Temporal Lobe. Brain, 51: 385.

tions of faulty adjustment to personal problems. There is usually a progression in the symptoms. They may come and go but with each return they appear in more exaggerated form and new indications of disease are usually added. Individual distortions of symptoms of organic disease are negligible whether the patient has been normal, neurotic or psychotic. If he has not been normal it is fairly easy to establish what has been the characteristic manner of speech and the departure from this is usually rather obvious.

Somewhat later in the progress of the disease there is a lack of spontaneity, the manner of speech and the tone of voice is monotonous and there is a peculiar retardation in speaking. It is necessary for the patient to exert unusual effort in order to comprehend questions and to elaborate a response. The more complicated the proposition is the more laborious is the formulation and the expression of ideas. This retardation is in excess of any associated feelings of depression and may occur in the absence of depressive reactions. It is often a part of an apathetic or dazed state. Questions may have to be repeated several times and must possess unusual stimulating qualities. When the patient is sufficiently aroused considerable time may pass before the response is obtained. Even then it is brief and may be monosyllabic. The patient may also repeat the question before responding and sometimes he repeats the answer to the previous question. There is little inclination to go on with a conversation unless he is repeatedly stimulated and even this may not be sufficient if he is annoyed by being aroused or if he is very drowsy. In akinetic states the patient often is mute.

Peculiarities in speech may be a part of narcoleptic states, clouding of the sensorium or of memory difficulties. While the patient is somnolent his responses are adequate so long as he is kept sufficiently stimulated to remain awake. With the advent of confusion the patient tends to drift in his talk, it becomes rambling and incoherent and fragments of illusory or hallucinatory experiences may be incorporated. When memory is greatly impaired he may stop in the middle of a sentence without any apparent recollection of what he has been saying.

Fluctuations in intracranial tension give rise to wide variations in the linguistic output of the patient. Within a few hours he may

pass from a state of mutism to one in which he responds well to rather simple questions. A day or two later his talk may be essentially normal. When the pressure is increased his talk may strongly suggest general paresis or a Korsakow syndrome. Occasionally when a state of exhilaration and euphoria is present the patient may be quite overtalkative, apparently under pressure to express himself and may present punning, distractibility and flight of ideas. This condition may persist for weeks or it may be observed only now and then.

Aphasic disorders rather often complicate the patients' talk. Aphasia was observed in nearly 10 per cent of the cases and was first noted on an average of three months before death. In one case, however, aphasia was present for 13 years before death. The tumors in most of these cases were located in the left hemisphere and were either confined to the temporal and frontal lobes or had extended into these lobes from adjacent regions. When aphasia was associated with tumors in other regions of the brain it was usually less well defined.

In some of the aphasic cases the talk was little more than a jargon and was sometimes described as unintelligible. In such cases the responses in the attempts to repeat test phrases may be mistaken for the dysarthric utterances of the general paretic. This is especially true when the speech is thick and indistinct. Careful observation will disclose, however, that the aphasic patient does not stumble over certain letters of the alphabet and does not so readily misplace syllables. His difficulty consists chiefly in an inability to retain and to reproduce a complicated phrase. Words or syllables which he does reproduce are expressed clearly and consistently even though sometimes repeated.

Some of the comments made regarding the talk of individual patients as well as examples of aphasic disorders will now be presented:

1. For two years frequent convulsive attacks preceded by aphasia. Left frontal endothelioma.

2. Speech was slow and dragging so that he was unable to carry on a conversation. He would suddenly stop and did not seem to realize what he was saying. Left frontal glioma.

3. Talk at times rambling and incoherent. Temporary attacks of motor aphasia. Left frontal glio-sarcoma.

4. "I understand questions but cannot answer them; guess my head does not work." Unable to name a knife, spoon, key or tooth-brush either by means of sight or touch. Left temporal glioma.

5. Speech slow and indistinct. At times he misnamed common objects. Left temporal glioma.

6. Speech slow and monotonous. Right temporal glioma.

7. Indifferent, did not answer questions and did not appear to comprehend. A year later outspoken exaltation, distractibility and pressure of speech. Optic atrophy. Left temporal sarcoma.

8. When friends called one rainy day she asked. "Have you your umbrellas on your feet?" When asked what troubled her she responded, "I have never had anything except this *man* (leg)—I never had any bother before I always *bent*." Response to test phrases was, "Around the ruffel rascal the ruffel ruffel." Left temporal endothelioma.

9. Word blindness. Could tell individual letters and could spell short words but could not tell their meaning. Could name familiar objects. Could write from dictation and voluntarily but was unable to read what was written. Right occipital cyst.

10. Speech increasingly slow, hesitant and stammering. Frequently repeated himself in writing and in speech and occasionally left out words. Tumor of corpus callosum.

11. Apathetic speech slow and occasionally incoherent. A few weeks later spoke only on command. Tumor of anterior and middle thirds of corpus callosum.

12. Repeated questions asked and might hesitate in talking for half a minute at a time. Sarcoma beneath right temporal cortex extending into basal nuclei.

13. Aphasic for 13 years before death at the age of 35. Talk also frequently showed marked perseveration as for example in the responses to things seen. This was observed seven years before death. Nickle? "25 ain't it?" Key? "25." Purse? "50." Dollar bill? "Dollar ain't it?" Watch? "50 cents." Bottle? "50 ain't it 50?" Bill? "50-now ring a bell." Memo book? "50 cent piece." Clock? "Ah-ah-I don't know." Attempts to repeat test phrases brought the following results: Methodist Episcopal? "Misty pel." Electric hippopotamus? "Electric-cohoes pocroes." Around the rugged rock, etc? "Round the rodris erodicks de rang." "Around the ratics erodicks de rang." Angioma of circle of Willis involving the left temporal, parietal and frontal lobes and completely filling left ventricle.

Mood.

There have been many observations upon the emotional changes which accompany brain tumors and some attempt has been made to correlate these changes with the location of the tumor. Ever since "moria," a peculiar childish hilarity with a tendency to jest and to

make puns, was ascribed to pre-frontal tumors by Jastrowitz there has been difference of opinion regarding the localizing value of this symptom. The same applies to "Witzelsucht," a tendency to play clownish tricks, which Oppenheim also associated with frontal tumors. While some insist upon the specificity of these manifestations the majority of investigators have concluded that these symptoms are uncommon even with frontal tumors.

Although practically all students of this subject have recognized states of anxiety or apprehension, depression or euphoria as well as indifference no attempt has been made to determine what the sequence might be and the relation of these emotional changes to brain pathology. Some have stated that the mood is determined in large part by the type of personality.

So many individual variations are observed that it would be impossible to draw any general conclusions unless a large number of cases were studied. In order to determine what the sequence might be note was made of the time which elapsed between the first appearance of an emotional change and death. Among the changes studied were those described as levity, cheerfulness, exhilaration, euphoria, irritability, apathy, depression and apprehension. The time relationship between suicidal or hypochondriacal tendencies and death was also observed.

It was found that what have been interpreted as neurasthenic hysterical or hypochondriacal symptoms were among the first indications of a personality change. Young persons seem to lose initiative and courage. They prefer to remain with a parent or an older relative and seem to enjoy being petted.

A little later all sorts of minor discomforts are noticed and the patient becomes impatient, peevish and irritable. There may be outbursts of anger on slight provocation. If any of the physical symptoms are prominent medical advice is sought.

As the disease progresses the patient begins to be seriously concerned about himself or his health. He may be retarded, dazed or he may appear to be contemplating a terrible fate. He has a vague appreciation that a change has taken place the nature of which he cannot guess. It is a strange experience which tends to occupy his attention to such an extent as to interfere seriously with his usual activities.

Medical treatment may have given him only temporary relief and perhaps by this time the patient may be troubled with headaches, vertigo and fainting attacks or he may have noticed peculiar sensory changes or weakness in some part of his body. The more serious attitude of his physician or the series of detailed medical examinations are likely to have impressed upon him the gravity of his illness. He has become more worried about himself and perhaps discouraged because he seems to be gradually getting worse.

As his symptoms become so distressing that he is seldom in peace and can no longer attend properly to his work he begins to lose hope. Increasing feelings of depression greatly aggravate his physical discomforts and distort his whole outlook on life. He feels that he might as well end his suffering and he may carry suicidal impulses into action.

By this time the evidence of organic brain disease is usually sufficient to require close medical observation in a hospital. A few months may pass before the exact nature of the disease is determined or at least before a decision is reached regarding surgical intervention. Until this time the emotional changes have been determined largely by the inherent tendencies of the patient and it can be said that his depressive reaction is justified by his suffering and by a realization that he is dangerously ill. He is very likely to give expression also to feelings of anxiety and he may become tense and agitated.

The changes which follow from this point on are determined more and more by the disease itself. It would seem that when the limit of endurance is reached nature has provided a means of escape from greater suffering. As a matter of fact structural changes in the brain resulting from the growth of the tumor itself or from intracranial hypertension or more often from both of these factors do make the patient less sensitive to pain and less capable of appreciating the seriousness of his illness. This is particularly true in cases of third ventricle and frontal lobe tumors. The patient may say that he is " feeling fine " even though he has just had a violent headache or an attack of vomiting. As though to compensate for the suffering thus far experienced he may pass into a state of euphoria in which he can again indulge in some of the earlier pleasures of his life. He is no longer concerned about his illness,

social conventions or his usual responsibilities. He may laugh and joke or behave in a hilarious, unrestrained manner. His failing memory may have its compensation in fabrications. He may again be careless of his personal appearance and indifferent to incontinence.

Such changes often suggest a Korsakow syndrome and the combination of euphoria, memory disorders, change in personality, deterioration in habits, speech disorders and even Argyll Robertson pupils presents a close resemblance to the clinical picture of general paresis.

Two other avenues of escape are provided. The patient may become confused, disoriented and mildly delirious or he may pass into a somnolent state. In either case he is only now and then made aware of the actual situation through the stimulus of others or by cries of pain. There is not much affective component at this period and still less in the terminal stage of mental deterioration and apathy or in the succession of stupor and coma prior to death.

This reconstruction of the sequence in affective reactions to brain tumor is based upon a general impression gained from the study of a large number of cases and more particularly from the observation that depressive reactions and suicidal tendencies occur on an average of two years before death while the exhilarated, carefree and euphoric states usually do not appear until about six months before death. The minor emotional changes which are a part of the early manifestations of this disease may be observed several years before death.

The sequence of emotional reactions and the duration of any phase varies greatly with each case. Any one of the phases may be absent or may be so prominent and of such long duration that other phases pass unnoticed. Unfortunately for the patient the depressive reactions are much more common and are associated with tumors in all parts of the brain. They are more profound with tumors in the posterior cranial fossa probably because in such cases the cerebral cortex continues to function for a longer period and the patient therefore continues to be in contact with reality.

On the other hand euphoric reactions are more commonly observed with tumors in the corpus callosum and in the frontal and

temporal lobes. These reactions also occur when the tumor obstructs the flow of the cerebrospinal fluid or when there are multiple tumors.

The relation of intracranial tension to emotional changes is suggested by those periods in the illness during which euphoric, somnolent, or confused states are interrupted by hours or days of clear sensorium and perhaps a return of the depressive reaction. It is known that intracranial tension varies greatly and sometimes rapidly. In any case there seems to be no other adequate explanation for the marked variations in the patient's emotional state and in his contact with reality. These fluctuations are more commonly observed about eight months before death.

When the tumor involves the optic thalamus the unprovoked laughing and weeping which is beyond control represents a degree of emotional instability which is almost pathognomonic of disease in this region. Such instability may however be a response to intracranial hypertension.

As a rule the euphoric state seems to the observer to be quite empty and devoid of real mirth. The contrast with the actual condition is tragic. The patient's jokes are pointless and his pranks are silly. He may prance about the house in his night shirt or he may be highly amused by urinating in his slipper and emptying it out the window. In spite of his laughing and joking he may not be able to keep back the tears and his euphoria may be interrupted by moments when he cries out, "Oh God I am lost." An admixture of confusion produces a state closely resembling that of a talkative person who has partially awakened from ether narcosis.

Suicidal tendencies are observed in about 10 per cent of the cases. They are a result of a realization of the nature and seriousness of the illness and a belief that the outlook is hopeless. They arise from a desire to escape from further suffering. The attempts at self destruction are usually impulsive and are often made during paroxysms of pain. Suicidal tendencies are less frequently observed in tumors of the anterior portion of the cerebrum than in other regions of the brain.

Apprehension and anxiety are observed on an average of about one year before death. They are more commonly associated with tumors in the posterior cranial fossa. The patient may be appre-

hensive as to the outcome of his illness or he may be in a frenzy because he believes that death is approaching. The psychotic patient sometimes apprehends attack by hostile persons or he may be greatly worried about the welfare of his family.

Some of the more typical affective reactions as observed in different cases have been described as follows:

1. Excitable and impulsive. Later frequent alternation of depression and euphoria. Sometimes anxious and feared death. Finally somnolent and then comatose. Right frontal tumor.

2. Two months before death uncontrollable laughing and weeping. Apprehensive that his head was going to be chopped off and said that his room smelled of slaughtered and dead men. Optic atrophy from increased intracranial tension. Right frontal cyst.

3. Unsually quiet, said home seemed empty and wished to have children near her. A month later alternating somnolence and cheerfulness. Papilledema. Two months later stuporous and then died. Left frontal glioma.

4. Drowsy but when aroused was dejected and said "I don't know what will become of me." Optic neuritis. Died eight months later. Sarcoma involving both frontal lobes.

5. Marked change in personality of a clergyman two years before death. Indifferent to duties, apt to take everything as a joke and had improper relations with a servant. Stopped wearing undergarments and socks and did not seem to realize that there was anything unusual in his behavior. Said he felt fine except that he had some trouble with his eyes. Optic atrophy. Sarcoma involving both frontal lobes.

6. "They are going to lynch me—I feel terrible—they said they would drown me—they were going to—." Two months later happy and fabricated according to topics suggested. In another month was dead. Left temporal endothelioma.

7. Anxious, believed she must die and wished to see her child. Ten months later outspoken exaltation, pressure of speech, distractibility and overactivity as soon as anyone began a conversation. When left to herself was rather quiet. Sudden mood changes from angry excitement to mild depression. Optic atrophy. Died three years after mood change was first observed. Left temporal sarcoma.

8. Fifteen years ago began to be "very nervous, emotional and despondent." Five years ago after having a sensation of a mouse creeping down her right arm, "more or less neurasthenic and hysterical with periods of great despondency." Suffered great distress in the head. On admission "markedly emotional and hysterical." Tumor of left superior parietal convolution removed by operation.

9. Constant intense pain in head with sensation of something being torn apart. "Had to be restrained from clutching her throat and tearing her hair." Became somnolent and a month later died. Right cerebellar glioma.

10. A year and a half before death she followed her mother about the house and would not go to bed unless someone slept with her. Two months later she cried and said, "I'm so afraid—scared since they put a machine over my head." Imagined they were going to drown her sister and cried "Poor child, let me suffer instead of her." Left cerebellar gumma.

11. Fourteen months before death drank a bottle of medicine. Had threatened suicide many times and said he was tired of living and suffering. Five months later fearful of being injured in some way. Described as being "bright and happy at times" but made grimaces as if suffering pain. When pain was severe he was very depressed and believed he had only a few hours to live. Cerebellar carcinoma.

12. Profoundly depressed, said he was an unpardonable sinner, tried to drown himself and once flung himself into a fireplace. Little change in his condition for nearly six years and then after a few months of stupor he died. Left cerebellar tumor.

13. After four months of violent headaches, failing memory and attacks of drowsiness a school teacher was noted as being continually cheerful and euphoric. He laughed freely and was not at all concerned about his illness because "dear God will help me." When asked a few weeks later why he was so happy he said he had attended his nephew's wedding the day before (was in hospital). Papilledema. During the next two months, prior to his death, he sang and prayed, believed he was at the wedding of his nephew, made gesticulations of a comic singer, said he was a child, crawled on his hands and knees and appeared in the dining room without clothing. As a rule he felt happy, said he was entirely well and ready to go to work. Although he was then blind he believed he could see well. At times, however, he lay for a whole day motionless. The end came after a succession of confusion, deep sleep and coma. Glioma of corpus callosum invading both cerebral hemispheres.

14. Two years ago moody and somewhat distant. Six months later severe headaches and vomiting. On admission, face had strange blank expression. He sat for hours and gazed into space. Responses were usually in monosyllables but at one time he said it seemed as though he was coming out of ether. Later he declared that he was perfectly well. Papilledema.

Within the next two months although he yawned continuously and became more and more retarded and drowsy he continued to say that there was nothing the matter with him.

Finally he became apathetic, responded to questions after long intervals of silence with a nod or a monosyllable and he seemed unaware of the presence of food in his mouth. His gait and face were then typical of advanced parkinsonianism.

Astroblastoma within the third ventricle.

Hallucinations.

When the complex and manifold problems of hallucinations are taken into consideration it would seem difficult to find any certain correlation between these phenomena and other manifestations of brain tumor. Hallucinations are associated with such a wide variety of conditions and diseases that it is impossible to determine to what extent they may be psychogenic or toxicogenic even in cases of organic disease of the brain.

Crude hallucinatory experiences may be elicited by mechanical stimulation of end-organs or nervous pathways but the response is dependent upon the ease with which stimuli pervade the nervous system as well as upon the great urge for the fanciful expression of the unconscious. Here the mystical, superstitious and magical background of the race survives and its ungratified desires are forever emerging in dreams, fantasies, illusions and hallucinations whenever there is any interference with the orientation to reality.

Crude hallucinatory phenomena seem to be more frequently associated with organic disease of the nervous system than with psychogenic disorders and there is some specificity in the hallucinatory response to certain toxic substances such as cocaine,[15] alcohol,[16] hashish [17] and mescaline.[18] Even these responses are not uniform and are modified according to the peculiar susceptibilities and tendencies of each individual. On the contrary in the so-called functional disorders whether artificially induced through hypnosis or whether the result of psychic conflicts the hallucinations are usually highly organized and they express the tabooed unconscious longings of the individual.

Organic disease of the brain interferes with reality orientation through actual destruction of essential structures, through pressure from edema, hemorrhage, tumor growth and through obstruction to the circulation of the cerebrospinal fluid. Adequate contact with

[15] Jacobi, A.: Die psychische Wirkung des Cocains in ihrer Bedeutung für die Psychopathologie. Arch. f. Psychiat., 78: 383.

[16] Schneider, C. A.: Studies in Alcoholic Hallucinoses. Psychiatric Bull., 1: 3.

[17] Welsh, J. H.: Hemp Drugs and Insanity. J. Ment. Sci., 40: 21.

[18] Buchanan, D. N.: Meskalinrausch. Brit. J. Med. Psychol., 9: 67.

reality may also be impossible because of the pathological stimulation of nervous structures by disease processes. However much the deprivation or distortion of function at the higher levels of integration may contribute to hallucinatory phenomena there is always a tendency to reconstruction in accordance with the patterns of the nervous structures remaining intact.

On this account it is desirable to note the content and trend of the hallucinations in addition to their mere presence and their variety. In so far as the usually meager notations in the original case records permit, the content of the hallucinations is here presented. For the sake of economy and to facilitate comparisons the observations have been grouped according to the sensory pathways chiefly affected and a notation of the type and of the location of the tumor has been made in each case. In addition to the cases reported in tabulated form there were at least half as many more in which the notation gave less information regarding the content of the hallucinations.

Visual hallucinations.	Tumor.	Location.
1. Saw faces of human beings and animals.	Endothelioma.	Bilateral frontal.
2. Saw people coming into the room chiefly through the windows.	Endothelioma.	Left frontal.
3. Saw people pass the door (none present).	Glioma.	Right frontal.
4. Eyes seemed like "a cat's eyes in the dark."	Gliosarcoma.	Left frontal, temporal and parietal.
5. Converses with imaginary person.	Glioma.	Right frontal.
6. Saw her children and talked with them (not true).	Glioma.	Bilateral frontal.
7. Saw an automobile above the tree tops (occurred only once).	Meningioma.	Between right frontal and temporal.
8. Flashes of light described as "luminous things."	Gliomatous cyst.	Right temporal.
9. Saw colored lights and a procession of queer figures marching on the ceiling.	Gliomatous cyst.	Right temporal.
10. Extraordinarily beautiful flowers intensified by fragrant odors. Vision so vivid that objects seemed increased in size.	Glioma.	Left temporal.

	Visual hallucinations.	Tumor.	Location.
11.	Saw boy on the wall. At another time a man dressed in white, bending over to tie his shoe. Later on the wall saw children sitting around a desk, but this disappeared when light was turned on. Two weeks after operation once saw a "lady wearing a hat."	Gliomatous cyst.	Lower right temporal.
12.	On one occasion saw wild animals in front of him. They gradually faded away.	Glioma.	Right temporal.
13.	Saw something like a big, red wall on the left side.	Glioma.	Right temporal.
14.	Black dancing figures on the wall.	Tumor.	Right temporal.
15.	Saw circles of light off to either side like a new moon.	Glioma.	Right superior temporal gyrus.
16.	Saw horses, cows, pigs and shipwrecked men.	Cyst.	Left temporal.
17.	Saw little people including a little old woman approaching on the left.	Cyst.	Right temporal.
18.	Saw very black cat hunched up as though angry. Occasionally saw black specks. Both visions to the left. Vision gradually failed and no return of hallucinations after operation.	Glioma.	Right temporal.
19.	Saw red and yellow fish, sandy eels, a frog jumping off the table and snakes running away from the Lord in the garden (alcoholic).	Glioma.	Right temporal.
20.	Saw her child sitting on the bed; used to hold conversations with her.	Sarcoma.	Right temporosphenoidal.

	Visual hallucinations.	Tumor.	Location.
21.	Repeatedly saw woman friend moving about in room all night. Man with a gold helmet came into room with examiner and sat in a chair beside him. Later "a woman riding horseback with a sheet of music propped up in front of her. She used her hands as though playing a piano on the horse's neck." Visions always to the left.	Cystic glioma.	Right temporo-sphenoidal.
22.	Little black woman always very actively engaged in cooking (associated with epileptic fits).	Sarcoma.	Right temporo-sphenoidal.
23.	Saw ships of various kinds and other objects which were passing along the wall.	Carcinomatosis.	Right temporal and parietal. Left parietal and occipital.
24.	Saw objects moving about especially on the right side.	Carcinomatosis.	Temporal and frontal. Basal ganglia, cerebral and cerebellar peduncles.
25.	Saw a bird in the room and reached out several times to grasp it.	Glioma.	Right temporal and optic thalamus.
26.	Saw leopard and other animals on the wall; little yellow people; a steady glow of light on the right side; a red colt moving slowly; a dog with pointed ears and brown spots, standing out in the field and moving his head from side to side; red objects like children's balloons floating in the air; and a lot of kittens playing. One directly ahead was green. Visions once or twice seen on the left.	Glioma.	Right temporal, thalamus and ventricle.
27.	A crowd of men playing cards but ending game in a quarrel.	Glioma.	Left temporal optic radiation and thalamus.
28.	Flashes of light in left visual field for 10 months.	Carcinoma.	Right occipital.

	Visual hallucinations.	Tumor.	Location.
29.	Many colored animals and objects; at times myriads of moving objects and various colors when headache more severe.	Tumor.	Right occipital.
30.	Saw objects one above another, all sorts of colors jumbled up—like darkness, glass, a lot of bricks and carpets smeared up in different colors. Always seen to the left.	Tumor.	Right occipital.
31.	For one week saw flowers to the right.	Hemangioblastoma.	Right cerebellar.
32.	Saw colors even with her eyes shut—made her feel very uncomfortable. Purple colors not so bad.	Sarcoma.	Left cerebellar.
33.	Saw God and the devil. Saw mother running up and down the ward at night.	Gumma.	Left cerebellar.
34.	Although nearly blind saw father at times and talked with him.	Sarcoma.	Cerebellum.
35.	Flashes of light associated with attacks of headache. Also saw dogs, cats, mice and bugs.	Tumor.	Left cerebellar.
36.	A large blue and sometimes yellow flame like "a great electric discharge between two giant electrodes" seen at intervals for about two years. Later saw a large, inverted dark colored bowl. These visions were seen day and night with the eyes open or closed. They disappeared after operation.	Dermoid cyst.	Cerebellum, midline.
37.	Saw eels, fish and old women...	Carcinomatosis.	Cerebellum.
38.	Sudden flashes of bright light or a sensation of darkness that came from left side and preceded epileptic seizures. Sometimes a shadow of a person appeared on her left side.	Tumor.	Corpus callosum, splenium, invading right optic thalamus.
39.	Saw dirt on his clothes and shoes and kept brushing with his hand in the same place.	Glioma.	Corpus callosum, internal capsule and basal nuclei on the left side.

Visual hallucinations.	Tumor.	Location.
40. Saw strange things.....	Glioma.	Right ventricle.
41. Suddenly and always on the right saw little men and dolls, in colored dresses jumping about near the eyes. Disappeared in few seconds or if eyes were blinked or the head turned.	Tumor.	Pituitary.
42. Dark spots obscured vision.....	Teratoma.	Pituitary.
43. For three years attacks of pounding headaches, vertigo and loss of memory associated with visual disturbances in the form of a shimmering appearance like the heat waves over a stove.	Colloid cyst.	Filling third ventricle.
44. Saw big, black dogs surrounding her.	Adamantinoma.	Cranio-pharyngeal duct.
45. Saw the devil.....	Sarcoma.	Right cerebral peduncle.
46. Repeatedly saw "a man stuck in a large section of drain pipe." This vision appeared suddenly, was vivid, lasted about two minutes and its disappearance was usually accompanied by a rushing sound in the head. Later sudden periods of "black darkness" or dazzling, bright light. These were followed by vivid colors, particularly red and green. She saw a wagon standing in a farmyard and a door with a strange man's face on it.	Acoustic neuroma.	Left cerebello-pontine angle.

Auditory hallucinations.	Tumor.	Location.
1. Heard dead mother calling her..	Glioma.	Right frontal.
2. Talking with imaginary person..	Glioma.	Right frontal.
3. Complains of noise made by a still which she imagines is across the street.	Glioma.	Right frontal.
4. Talks in advisory tone to children whom she imagines with her.	Endothelioma.	Bilateral frontal.

	Auditory hallucinations.	Tumor.	Location.
5.	Frequently thought he heard his children.	Cystic glioma.	Right frontal.
6.	Hears and talks with her children.	Glioma.	Right frontal.
7.	Roaring in the head like blowing of the wind through the trees—sensed all over the head. For two nights thought sister was calling for help outside of his door and that at least three people were killed outside his door by cracking their heads.	Endothelioma.	Bilateral frontal.
8.	Heard people knocking on the door and telephone conversations.	Gliomatous cyst.	Right temporal.
9.	Awakened husband because she thought she heard an automobile outside. This hallucination persisted several weeks and then disappeared.	Glioma.	Right superior temporal gyrus.
10.	Heard sounds like wind blowing through the trees. After operation and after he had returned to work heard people singing far away.	Glioma.	Right temporal.
11.	Asked what members of family were saying when nothing had been said.	Spongioblastoma.	Left temporal.
12.	Thought people were knocking at the door; heard telephone conversations.	Gliomatous cyst.	Left temporal.
13.	Heard singing and beautiful music as though on a victrola.	Endothelioma.	Left temporal.
14.	Heard bells and bands. Called out to imaginary people.	Carcinomatosis.	Right temporal and parietal. Left parietal and occipital.
15.	Heard sounds such as might be made by a running victrola or by a violin.	Carcinomatosis.	Temporal, frontal; basal ganglia; cerebral and cerebellar peduncles.
16.	Talking with imaginary people..	Sarcoma.	Right temporosphenoidal.

Auditory hallucinations.	Tumor.	Location.
17. Loud, splitting noises like those of a hammer on an anvil.	Tumor.	Right occipital.
18. Voices in the room told him to do certain things.	Sarcoma.	Cerebellum.
19. Voice told her she was going to be taken to A. for special treatment.	Endothelioma.	Left cerebellar.
20. Heard things which no one else could hear.	Carcinomatosis.	Cerebellum.
21. Heard coarse, loud voice. Heard people say that different babies in the neighborhood were dead, that she was the cause of their death and that she would have to bury them.	Gumma.	Left cerebellar.
22. Sudden "rushes of blood" to her head during which she would feel terrific roaring and crackling in her head.	Tumor.	Cerebellum.
23. Heard God talking to him. God gave him power to do as he chose. "They claim I scandalized the sisters."	Glioma.	Right ventricle.
24. Frequently heard voices.....	Adamantinoma.	Cranio-pharyngeal duct.
25. Heard what appeared to be waves.	Glioma.	Pineal.
26. Talking to imaginary persons...	Cyst.	Pineal.
27. Voices told her to masturbate..	Sarcoma.	Right cerebral peduncle.

Olfactory hallucinations.	Tumor.	Location.
1. Odor in nose of decayed flesh...	Glioma.	Right frontal.
2. Thought gas escaping into room.	Endothelioma.	Bilateral frontal.
3. Smelled tobacco smoke (none present).	Carcinomatosis.	Frontal, temporal; basal ganglia; cerebral and cerebellar peduncles.
4. Smelled camphor preceding attacks of unconsciousness.	Glioma.	Right temporal.
5. Thought he smelled and tasted peaches. Later smelled and tasted roasted peanuts.	Cystic glioma.	Lower right temporal.

Olfactory hallucinations.	Tumor.	Location.
6. Occasional disagreeable odor "like something from another world—can't describe it."	Cystic glioma.	Right temporo-sphenoidal.
7. Smells fresh paint so distinctly that she is surprised others do not detect it. (Associated with petit mal attacks.)	Glioma.	Right temporal.
8. Cancer in his brain smelled so terribly he could not stand it and had to keep his hat on.	Glioma.	Right temporal.
9. "What a horrible smell." (Associated with epileptic fit.)	Sarcoma.	Right temporo-sphenoidal.
10. A horrid smell like "burning dirty stuff" made her feel suffocated.	Glioma.	Right temporo-sphenoidal.
11. "An awful smell like rotten weeds."	Endothelioma.	Right temporal.
12. Pleasant odors intensified beauty of hallucinated flowers.	Glioma.	Left temporal.
13. "A horrible smell" in her nostrils at times.	Tumor.	Corpus callosum, splenium.
14. Suddenly experienced a strong and very repulsive odor like a "stink bomb" of hydrogen sulphide. Lasted about 5 min. and not associated with confusion or a feeling of unreality. Disappeared following operation.	Dermoid cyst.	Cerebellum, midline.
15. Constant disagreeable odor, food and water smelled like soap.	Sarcoma.	Left cerebellar.
16. Sweet odor like that of chocolate frequently noticed.	Glioma.	Pineal.

Gustatory hallucinations.	Tumor.	Location.
1. Thought he smelled and tasted peaches. Later smelled and tasted roasted peanuts.	Cystic glioma.	Lower right temporal.
2. Sudden sensations like the taste of peppermint.	Endothelioma.	Left temporal.
3. Frequently complained of bad tastes in her mouth.	Tumor.	Corpus callosum, splenium.
4. Horrible smell preceded by queer slimy taste in mouth extending down to larynx.	Tumor.	Middle third cerebrum.

Gustatory hallucinations.	Tumor.	Location.
5. One attack of peculiar tastes and odors.	Meningioma.	Between right frontal and temporal.

Tactile hallucinations.	Tumor.	Location.
1. Sudden sensation of a mouse or ants creeping down the right arm.	Endothelioma.	Superior parietal convolution.
2. Peculiar crawling sensation in left ear—growing worse.	Tumor.	Cerebello-pontine angle.
3. Sensation of ants creeping in right hand.	Tumor.	Medulla.
4. Crawling feeling in fingers of right hand.	Cyst.	Left cerebellum.
5. Feeling of ants crawling in both arms.	Tumor.	Middle cerebellum.

In some of the cases hallucinations appeared only a few times but in other cases these experiences recurred frequently for weeks or months. It is impossible to arrive at an accurate percentage of the frequency but it is probable that hallucinations are present at some time during the course of the illness in at least 50 per cent of the cases of brain tumor.

More than half of these cases have visual hallucinations and about 30 per cent have auditory hallucinations. The frequency of hallucinatory distortions of other senses occurs in the following order: olfactory, gustatory and tactile, the olfactory occurring about three times as often as the other two. It is not surprising to find such a high proportion of visual hallucinations when the distance over which visual impulses must travel is taken into consideration as well as the fact that visual hallucinations may be associated with cataract, hemorrhage into the retina, optic atrophy and exudate around the chiasm in addition to disease affecting the pathways to the occipital cortex.

It appears also that hallucinations more often occur with tumors of the temporal lobes and this is particularly true of the visual type. They are seldom found with tumors of the parietal lobe and the hallucinations associated with tumors of the posterior cranial fossa are more often crude and poorly organized.

Hallucinations may be experienced at any time during the course of the illness. Occasionally they are among the first manifestations of brain tumor and they may appear several years before a correct diagnosis has been made. On the other hand they may not be observed until the patient becomes confused or delirious and sometimes not until shortly before death. In almost all of the cases there is other evidence of increased intracranial pressure and hallucinations usually disappear following operation.

The quality of the hallucinations is somewhat distinctive. A large proportion of the visual hallucinations consists of flashes of light, vividly colored lights or objects, or contrasting " black darkness " and " dazzling " white. There may be scintillating scotoma or merely slight elaborations of specks or spots. Animals of all kinds and sizes are commonly seen. There is usually a great deal of activity in the form of rapidly moving lights or objects, dancing figures, floating balloons or the common movements of animals. Human beings appear as faces or the whole individual may be observed in a familiar scene. More often there is some distortion in the apparition or the behavior of the hallucinated person is strange and grotesque.

Auditory hallucinations associated with tumors of the frontal or temporal lobes almost always include voices or singing, bells or other forms of musical sounds. This form of hallucination occasionally is observed with tumors in other regions but it is in marked contrast to the ringing, buzzing, hissing, blowing, whistling sounds or the loud roaring, splitting and crackling noises which frequently are associated with tumors of the posterior cranial fossa.

With a few exceptions the olfactory and gustatory hallucinations are associated with tumors of the temporosphenoidal lobe and more often those on the right side. They are usually a part of the uncinate gyrus seizures first described by Hughlings Jackson [19] which are ushered in by disagreeable olfactory and gustatory sensations and which may be accompanied by smacking and tasting movements and by visual hallucinations.

The tactile hallucinations observed consisted chiefly of sensations which suggested ants creeping in or upon the skin. These sensa-

[19] Jackson, H., and Beevor, C. E.: Case of Tumor of the Right Temporosphenoidal Lobe bearing on the Localization of the Sense of Smell, etc. Brain, 12: 346.

tions were associated with tumors in the pons, medulla and cerebellum. With one parietal lobe tumor the sensation was elaborated to that of a mouse creeping down the arm.

Other peculiar sensory experiences such as heat flashes, heat waves or tingling, " pins and needles," prickling or " tearing apart," " saw-teeth pricking " sensations are not uncommonly observed but little information is available regarding them from the cases studied. One patient several times during the day had a sensation of something rushing up from her body which got in her throat and choked her. Another had sudden burning pain in the right upper extremity beginning with the tips of the fingers and extending upward as far as the shoulder. There were also sticking pains in the right side of the face.

One of the more striking features of these hallucinatory experiences is the state of feeling which accompanies them. As a rule these new experiences are unpleasant and annoying. They give rise to apprehension and anxiety and some patients are terrified. The patient usually regards the hallucinations as strange phenomena quite foreign to his personal experience and not in harmony with the usual trend of thoughts. Some patients are unable to sleep, become agitated and wonder whether they are " going insane." Voices sometimes come from the dead and even when there is merely singing the patient is concerned as to its cause or annoyed because it persists. Some of the cruder auditory phenomena are especially annoying because of their persistent disagreeable qualities. Of all the hallucinatory experiences the olfactory and gustatory are the most unpleasant. They are described as nasty, slimy, horrible, disgusting and nauseating and in addition there is frequently the sensation of being suffocated or of " being shut in a box with insufficient air."

Occasionally the Lilliputian hallucinations described by Leroy [20] are observed. Little men and dolls in colored dresses were observed dancing about near the eyes or little dolls dressed in fantastic, highly colored dresses were seen jumping up and down in a lively

[20] Leroy, R.: The Syndrome of Lilliputian Hallucinations. J. Nerv. and Ment. Dis., 56: 325.

Leroy, R.: The Affective States in Lilliputian Hallucinations. J. Ment. Sci., 72: 179.

manner. These hallucinations seem to be purely visual in nature. As a rule the patient is not particularly annoyed by these experiences and he may be somewhat amused.[21] On the other hand when the hallucinated objects suddenly assume gigantic proportions and as quickly change to normal or lilliputian size the patient may become alarmed.

The most pathognomonic of the brain tumor hallucinations are those which accompany visual field defects. All kinds of visual hallucinatory phenomena are seen in the defective field of vision and on the side opposite to the site of the tumor.[22] Hemianopsia itself is regarded as an important localizing sign but visual hallucinations may precede this defect and they often are associated with it.[23] Careful and repeated examinations may show a succession of homonymous hemiachromatopsia, visual field defects, hemianopsia, and visual hallucinations. These hallucinations appear in the defective field and are therefore referable to the side opposite that of the tumor. These phenomena may be observed in both temporal and occipital tumors.

Delusions.

In spite of the fact that delusions as well as hallucinations have their origin in the unconscious and are merely expressions of desires and fears in disguised form it is difficult to conceive of the former as being determined by gross lesions in the brain. The formation of delusions is not dependent upon disorder of sensory or motor pathways although there may be some organic basis for the underlying feeling of insecurity. The more bizzarre delusions of the mentally deteriorated patient are reminiscent of a primitive men-

[21] Souques, A., et Baruk, H.: Hallucinations lilliputiennes au cours d'une tumeur de l'hypophyse. Rev. Neurologique, 1928,[2] p. 75.

[22] Cushing, H.: The Field Defects Produced by Temporal Lobe Lesions. Brain, 44: 341.

Cushing, H., and Bordley, J.: Inversion and Interlacing of the Color Fields, An Early Symptom of Brain Tumor. Jour. Nerv. and Ment. Dis., 36: 549.

[23] Waggoner, R. W.: Hemianopsia and Visual Hallucinations. Arch. N. and P. 22: 1097.

Pick, A.: The Localizing Diagnostic Significance of so-called Hemianopic Hallucinations, etc. Amer. J. Med. Sci., 127: 82.

tality but those which are fixed and systematized are highly elaborated reconstructions in which conscious activities are prominent. There is usually some attempt to arrive at a logical conclusion even though the patient is blind to faulty premises. It would seem that such delusional formation would not be possible if there were gross interference with cortical activity by the tumor itself or through increased intracranial pressure.

Perhaps an important factor in determining the infrequency of delusional ideas is the presence of actual organic disease. It has been commonly observed that psychotic manifestations are less obvious when the patient becomes physically ill. It seems that his attention and feeling are directed to an illness which is more concrete and which may be a greater menace to his integrity than the imagined aggressions of the external world. It may be that the patient gains sufficient outlet for his aggressive tendencies during periods of irritability and violence and that at other times he is too overwhelmed by physical discomfort or pain to construct a delusional defense.

Whatever the correct explanation may be it is a fact that delusions are seldom noted in connection with brain tumors. Even with previously psychotic patients the development of brain tumor tends to minimize the expression of delusional ideas. Whenever delusions are noted they are usually of a persecutory nature and indicate an apprehension of personal or sexual attack.

The following excerpts from the few cases in which delusions were found will probably be sufficient to indicate that such phenomena are total personality reactions rather than responses to the presence of brain tumor:

1. Claimed persons were coming into her room at night and that she was being constantly moved from one place to another. Endothelioma pressing on the right frontal and temporal lobe.

2. Delusions of persecution. Left temporal glioma.

3. People spying on him and discriminating against him. Tumor of genu of corpus callosum and right frontal lobe.

4. Accused physician of being a villain who was plotting against her. Thought the food was poisoned. Tumor of splenium invading the right optic thalamus.

5. For three years had the delusion that his wife was unfaithful. Cyst of right occipital lobe.

6. Said nurses abused, starved and doped her. Thought everyone was trying to gain possession of her money. Sarcoma of cerebellum.

7. Suspicious that she might be poisoned. Said other girls teased her and accused her of having sexual relations. Gumma of cerebellum.

8. Delusions of persecution. Lipoma in interpeduncular space.

Orientation.

Contact with reality is so dependent upon the constant transmission of stimuli from the external world that interference with the function of any of the special senses leaves the individual susceptible to disorientation. Darkness alone invites the ghosts of the night to come forth and momentary disorientation is common even when a familiar place is viewed from a new angle. More often there is loss of contact when brain physiology is disturbed through the influence of some toxic substance or by the presence of organic disease of the brain.

Other physicians who have occupied themselves with mental confusion in cases of brain tumor have commented upon its frequency and its relation to intracranial hypertension. This problem has been carefully studied and presented by Baruk [24] with whose findings my own are essentially in agreement. He found symptoms of mental confusion at some time during the course of the illness in nearly 70 per cent of his cases and it is probable that all brain tumor patients are at times either confused or somnolent.

Disorder in the function of the special senses undoubtedly contributes to a state of confusion but the most constant and important factor in brain tumor cases is intracranial hypertension. Evidence of this is found in the marked improvement following surgical intervention, the injection of hypertonic salt solutions and in the response to a blocking of the flow of cerebrospinal fluid in those cases in which there is rhinorrhœa. Disorientation is also more commonly observed in the late stages of the illness when intracranial hypertension is almost invariably present.

Narcoleptic or somnolent states as well as confusion might be regarded as evidence of a protective mechanism by which the individual is spared the intense suffering of high degrees of intra-

[24] Baruk, H.: La confusion mentale dans les tumeurs cerebrales. L'encephale (1926), 19: 760.

cranial hypertension. This is illustrated by a case in which a relatively peaceful confused or somnolent state succeeded one in which the patient had to be restrained from clutching her throat and tearing her hair because of intense pain and a sensation of something being torn apart in her head. The physiological change in such cases appears to be an increase in pressure to such a degree that the usual conscious activities are no longer possible.

One of the first indications of a change of this kind is a retardation of both physical and mental activities. A patient may immobilize himself when pain is intense because he has learned that he suffers less if he remains perfectly quiet but beyond this is a state in which he is unable to overcome the retardation of psychomotor activities. His responses are slow and monotonous, it is difficult for him to concentrate and he is quickly fatigued. If he is given a series of arithmetical problems to solve the longer he works with them the poorer are the results. He may be unable to go on because of increasing confusion.

The degree and duration of the confusion varies according to the location and the rapidity of growth of the tumor and according to the stage of the illness. It is more intense and develops more rapidly when the tumor is situated near one of the narrow channels through which the cerebrospinal fluid must pass. If the tumor grows rapidly the blood and cerebrospinal fluid circulations have less opportunity to adjust to the increasing pressure.

Confusion may be very slight and transitory, it may be paroxysmal and alternate with crises of intense pain occurring in a clear sensorium or there may be dream-like states in which illusions and hallucinations are present.

A pathological somnolence, from which the patient can be aroused only to drift back again when the stimulation ceases, may persist for days or weeks. When he is aroused his responses are essentially normal but he may be irritable and prefer to return to a drowsy state closely approximating sleep in which he remains apparently indifferent to his condition, his surroundings or the passage of time. Now and then he may be aroused or may indicate by a frenzied distortion of his face that he is suffering another paroxysm of pain.

Among the equivalents of the retarded, confused or somnolent states are conditions in which the clinical picture strongly suggests

general paresis or Korsakow's syndrome. At such times the patient may be euphoric, may confabulate and sometimes an occupation delirium is observed. When the intracranial pressure is exceedingly high and the pain so excruciating that the patient finds no respite even with the aid of drugs he may become wildly delirious, impulsively suicidal, destructive or violent.

In the later stages of the illness after the brain has been subjected to increased pressure for a considerable period and probably because of more extensive destruction of the brain the clinical picture becomes that of an organic dementia in which the patient is more or less confused or is indifferent to his surroundings. His memory is then grossly defective, he is careless of his personal appearance and habits and he may be confined to bed. This picture is often abruptly changed by increasingly frequent and severe convulsive seizures, with loss of consciousness and a subsequent stupor.

Occasionally the patient may become stuporous and cannot be aroused. Apparently this is the result of an abrupt increase and high degree of intracranial pressure. A stuporous condition more often is observed toward the end of the illness although it may be the result of hemorrhage within or near the tumor or from rupture of one of the vessels of an angioma.

With all of these conditions there is more or less disorientation which fluctuates with the changes in the intracranial tension and with the amount of external or internal stimulation. As a rule the orientation for time becomes defective first, then the patient is unable to identify his surroundings and finally he fails to recognize even his own relatives. Not uncommonly the patient returns to an earlier period in his life. He may give correctly a former address or he may even dwell for a time in the scenes of his childhood. In the more severe forms of disorientation the patient may not be able to find his way about his own house and he may not even be able to locate himself properly in his bed.

In so far as the material permits the various degrees and kinds of disorientation will be illustrated by the following excerpts:

1. Dream-like state. Seems to have no idea of time. Very slow in dressing. Brushes one part of a garment mechanically for a long time. Does not seem to know what he wants to do and often forgets what he is doing. Eats large quantities mechanically although formerly ate little. At times does not seem to know where he is and even gets lost in his own house. Died two months later. Right frontal sarcoma.

2. For the past year frequently went on the street half clad. Right frontal glioma.

3. Irritable and forgetful. Wanders about in a dazed manner. Right frontal glioma.

4. A clergyman got lost on a business trip and after several days and with much difficulty managed to get back home. Left frontal glioma.

5. Practically no grasp on surroundings. Endothelioma, left frontal lobe.

6. Occasional nocturnal delirium. Sarcoma, bilateral frontal, more on left.

7. Disoriented as to time, place and person except that she knew her own name. For a week somnolent and died two weeks later. Stuporous on the day before death. Glioma, left frontal lobe.

8. Disoriented as to time and place. Glioma, right temporal lobe.

9. Wanders about aimlessly. Cannot find his way to the dining room. Unable to dress himself—tries to put his undershirt on his legs. No conception of the date. Gets out of bed at night to drive cattle and milk the cows. (Has been alcoholic.) Glioma, right temporal lobe.

10. Statements confused. Glioma, right temporal lobe.

11. Dazed and confused. Four months before death at times pranced around in his nightshirt and at other times seemed in a condition of dementia. Gliosarcomatous cyst, right temporosphenoidal lobe.

12. Wandered about the streets improperly clad, went to the station several times a day to meet her son and on one occasion fed candy to all of the horses on the street. In the hospital she put on clothing belonging to other patients. Ependymoma, right temporal lobe.

13. For past year made frequent mistakes in business such as giving money back to his customers. Died four years after this change was observed in his personality. Left temporal sarcoma.

14. Past two or three years momentarily dazed and disoriented. Left temporal glioma.

15. Completely disoriented. Rolls out of bed. Left temporal endothelioma.

16. A year before admission irritable and at times "muddled." On admission mildly delirious. Left temporal glioma.

17. Drowsy, rather confused and carried out commands after considerable delay. Left temporal glioma.

18. Three months before death imagined she went for a drive every evening. Tore up sheets to make reins and tied them to the foot of the bed. Always asking for dinner. Tumor of right temporal and frontal lobes.

19. Shortly before admission disoriented at night. Six months before death began to be somnolent. Toward the end delirious and finally comatose. Occipital sarcoma.

20. Says things are muddled. Left cerebellar fibroma.

21. Over a year before death seemed unaware of the nature of her surroundings. Left cerebellar gumma.

22. Over a year before death wandered aimlessly about the house and was unable to find her way back when she went out. Fibrosarcoma, right cerebellopontine angle.

23. Could be aroused to answer questions but showed marked echolalia. Dropped off to sleep several times during the examination. Tumor of splenium.

24. Extremely drowsy. Slow in executing commands and there was often an interval of a minute between stimulus and response. Realized that her mind wandered a great deal and that it was hard for her to concentrate. Tumor of genu of corpus callosum involving the right frontal lobe.

25. Easily confused in going about and relied entirely upon his son to guide him. Glioma in anterior portion of corpus callosum and both frontal lobes.

26. Attacks of somnolence several times per day. Preceding these he complained that he did not know where he was. Pinealoma which filled the third ventricle.

27. Seven years before death felt in a daze most of the time and at intervals was silly or exhilarated. Two years later began to have a continuous, profuse, watery discharge from the nose and there was then an improvement in his general condition. On several occasions when this discharge stopped he felt drowsy or became stuporous. Pinealoma extending anteriorly into the third ventricle and posteriorly into the aqueduct of Sylvius.

28. Lethargic, disoriented and increasingly somnolent during the last year of her life. Cyst of left corpus striatum. Ependymoma arising from floor of third ventricle.

29. At first seemed clear but as questions were asked he became more confused and was unable to calculate. Glioma filling the right ventricle and infiltrating the thalamus and lenticular nucleus.

30. Arrested for what was thought to be public intoxication. Imagined he fed his dogs and mules night and morning. Said he fed them with bedclothes. A week later he was tearing his clothing and mumbling to himself and two weeks after his arrest he died. Endothelioma of lateral ventricles and optic thalami.

31. Found wandering aimlessly about the streets. Disoriented as to time and place. Said he had six pairs of twins. Two weeks later confused, restless, rolling about in bed, picking at bed clothing and muttering to himself. Within a month he became comatose and died. Fibro-myxo-sarcoma of right ventricle involving the basal nuclei on the left side and the corpus callosum.

32. A month before death turning the lights on and off, rearranging furniture and carrying flower vases about. Spindle cell sarcoma involving the right parietal and both frontal lobes.

Memory.

The memory disorder found in brain tumor cases is so intimately associated with the capacity to maintain contact with reality that with few exceptions it does not occur so long as the sensorium

remains intact. Whenever memory is said to be defective, mental confusion or disorientation as well as evidence of intracranial hypertension are also present.

When the sequence of events is traced certain associated phenomena appear in the following order: increased intracranial tension, retardation of psychomotor activity, attention and concentration difficulties, mild confusion, impairment of retention, defective recent memory and finally loss of remote memory. Retention and recent memory difficulties are in large part due to the inability to pay attention and to concentrate until whatever is desired has been registered. Remote memory is seldom affected although it may appear to be disordered because the patient is too confused or too retarded to fully comprehend questions and to elaborate adequate responses. Occasionally there are indications of psychogenic factors in that certain painful periods in the past are forgotton. Sometimes there is an anterograde amnesia beginning with the onset of the illness.

Disorders of memory in general may be regarded as evidence that the disease is well advanced and that radical steps must be taken in order to save or at least prolong the patient's life. In the cases upon which this study is based the average duration of life after memory disorders were first noted was about six months. Very rarely such disorders have been observed over a period of several years. On the other hand there were cases in which death followed within a week after the appearance of memory difficulties.

No special predilection to memory disorders was noted because of the location of the tumor. The amount of time which elapses before these symptoms appear is of course dependent upon the location of the tumor and the rapidity of its growth just as with the development of confusion.

Not uncommonly there is no comprehension of the memory deficiency and at the same time there is a tendency to confabulate like that observed in the typical Korsakow psychosis. In the presence of euphoria the patient may boast of his excellent memory when it is obviously grossly defective. Just the opposite is observed in some cases, especially in the early part of the illness, *i. e.*, the patient not only is aware of his forgetfulness but he may complain bitterly that he has no memory.

Often the memory for recent events is so poor that the patient is unable to recall that he has just eaten or that he has just had visitors. He may even be unable to recall a painful experience such as a lumbar puncture against which he vigorously protested.

The following excerpts from the more illustrative cases will be sufficient to call attention to the usual types of memory difficulties:

1. Attention and ability to concentrate impaired. Memory failing rapidly. Speech slow and there would be sudden interruptions when he did not seem to realize what he was saying. Right frontal glioma.

2. Dressed himself slowly. Played with water in basin but forgot to wash himself. Just after brother had left forgot that he had called. Right frontal tumor.

3. Drowsy but gave main facts of her life in a hesitating manner and with promptings. Gave as her address a place where she had lived 22 years ago. This place ? "I think its-its-its-its-the next best thing." Died 11 days later. Left frontal glioma.

4. Frequently forgot what he had done a minute or two before. Died five months later. Left frontal endothelioma invading the right frontal lobe.

5. Unless interrupted she talked incessantly, repeating her answers as if she had forgotten that she had already replied. Died five weeks later. Right temporal ependymoma.

6. No retention after five min. Recent memory poor. Remote memory indefinite. Examination discontinued because patient too weak and too confused to cooperate. Died two weeks later. Right temporal glioma.

7. Completely disoriented. Retention poor. Occasional fabrications. Died six months later. Left temporal endothelioma.

8. Disoriented for time and place. Attention poor and memory markedly impaired. Did not grasp what was said unless it was repeated. Left temporal glioma extending into parietal and occipital lobes.

9. Poor memory for past two months. Right occipital carcinoma.

10. Oriented except for the year. Retention poor. Memory good. Died 14 months later. Carcinoma of cerebellum.

11. Complained that memory was gone and felt intensely depressed. Died one month later. Tumor of middle of corpus callosum and right island of Reil.

12. Three months ago while experiencing violent headaches and attacks of somnolence suddenly lost memory. Could not remember having seen a pupil the same morning and could not solve the most simple problems in arithmetic. On admission could not remember when he was born, how many children he had, who brought him to the hospital or what he had eaten for breakfast. Nevertheless he was able to recite completely a fable which he had learned in childhood. After three minutes could not reproduce a number with four

ciphers and there were gross omissions in giving the content of a test story. Died two and one-half months later. Glioma of corpus callosum.

13. Constantly dropping off to sleep. Speech slow. Could not remember where she was. Died 14 months later. Tumor of splenium invading right optic thalamus.

14. Five weeks ago failure of memory lasting a few days. One week ago memory failed again. Could not remember who brought her to hospital. Could not give her age, name or address and could not even remember ten minutes afterwards that she had been vomiting or that she had had severe headache. Died three weeks later. Tumor of splenium.

15. Recent memory poor. Some musical memories preserved. (A musician.) Died four months later. Pituitary epithelioma filling the third ventricle.

16. Amnesia for past five years. Had habit of stopping in the middle of a sentence and forgetting that she had been talking. Pineal glioma.

17. Almost complete loss of memory. Died three weeks later. Sarcoma of right ventricle involving the corpus callosum and the basal nuclei on the left side.

18. Disoriented and many times a day asked if dinner was not ready. Died within a week. Right subcortical, temporal glioma infiltrating optic thalamus and lenticular nucleus.

19. For three years attacks of pounding headaches, vertigo and loss of memory lasting three days. For two years memory failing and transient attacks of retrograde amnesia with confusion. A year ago after sleeping continuously for 36 hours there was transient loss of memory. Colloid cyst filling the third ventricle.

Insight.

A wide variation in the degree and kind of insight is observed in different patients and in the same individual at different stages of the illness. This may be expressed in the general behavior, the facial expression and the emotional attitude as well as in speech. A psychotic patient may present mute evidence of insight by remaining as quiet as possible, holding his head, covering it with a cloth or garment, applying cold compresses, frequently bathing it with cold water or by rubbing butter or grease in his hair.

In the more acute and painful phases there may be frenzied grimacing, an expression of extreme anguish or one of appeal for aid such as might be presented if a personal calamity was impending. Those who are less alert may sit and stare as though contemplating a horrible fate or they may present a puzzled, groping, inquiring facial expression.

At least 50 per cent of the patients at some time during the illness state that they are seriously ill. There may be some vague reference to the head being out of order or in other cases confusion and memory disorders may be acknowledged. Not uncommonly these patients anticipate death by several months. As long as the patient maintains contact with reality or is kept alert by pain he is prone to localize his illness in his head and may complain bitterly of failing mental faculties as well as of loss of physical strength and power. One psychotic patient protested against the skepticism of the physician with "I've really got something," and another was regarded as being delusional because he insisted that he had a cancer in his brain.

On the other hand most of the brain tumor patients especially in the late stages have little or no appreciation of the illness. Insight, like orientation and memory, fluctuates with intracranial tension. Even though it is present while the sensorium is clear it fades as disorientation, somnolence, or euphoria increase. As long as the somnolent patient can be aroused he is usually capable of expressing some appreciation of his illness but he tends to forget soon or to drift back to his apparently indifferent state.

In the more advanced stages of the illness the patient often seems to be shielded from a full realization of his plight. He may be blind and yet believe that he can see. He may ignore a whole half of his body when he becomes hemiplegic.

If an operation is proposed to such a patient he may show only a passing interest or concern but otherwise he behaves as though he had no realization of the gravity of the situation. A striking change may be observed after surgical intervention, however. There may then be a return of a full realization of the seriousness of the illness, a recognition of having been in a fog and a recollection of memory disturbances.

The different types and degrees of insight are illustrated by the following excerpts:

1. Said nerves not well for two years. Worried about severe nervous shocks (general convulsive seizures). Died seven months later. Right frontal glioma.

2. Said she was dead—"not alive at all"—and that she was a cow acting like a fool but couldn't help it. Died three years later. Left frontal endothelioma.

3. Totally blind and in broad daylight said it was dark but he could see if a candle was lighted. Died a month later. Bilateral frontal sarcoma.

4. Said he had a cancer in his brain and that it smelled so badly he could not stand it. This assertion was regarded as a delusion. He also said that trouble in his head prevented him from finding words to complete his sentences. Died two months later. Right temporal glioma.

5. Believed she must die and wished to see her child. Optic atrophy. Died three years later. Left temporal sarcoma.

6. Marked confusion. No insight. Died six months later. Left temporal endothelioma.

7. Screamed when moved and said knees hurt because of a bad cold. Shortly afterward said she had no pain but believed she would not live long. Died six days later. Left cerebellar sarcoma.

8. Said she was very sick and complained of pain in the top of her head which moved to the occipital region. Died four months later. Left cerebellar gumma.

9. Objected to being examined, saying that he was not sick. Died six weeks later. Glioma in anterior portion of corpus callosum invading both frontal lobes.

10. Drowsy, slow in executing commands and inclined to be tearful without provocation. Aware of a change in his personality. Realized that his mind wandered a great deal and that it was hard for him to concentrate. Choked disks. Tumor of genu of corpus callosum and right frontal lobe.

11. Partial insight into memory defect but said it was possible for his mother to be 60 when he was 53. Choked disks. At another time when he was unable to recall something important he exclaimed, "What a memory! What a memory! My memory is destroyed!" He also realized that the more he tried to recall the less he succeeded. Died in two and one-half months. Tumor of corpus callosum.

12. "Hysterical" laughing and weeping. Said she had had a stroke and was becoming paralyzed. Slight weakness of right side observed. Died four months later. Infiltrating glioma in region of left basal ganglia and involving the left fronto-parietal and temporal lobes.

13. Five years ago began to have dizzy spells in which she fell to the floor. Although blind for the past three years she attributed her inability to see to the darkness of the room. Pineal glioma.

14. Suffering from headache. Confused and anxious. Had hallucinations. Growing deaf and gait unsteady. Apparently no insight. Died a month after the onset of symptoms. Pineal cyst.

15. Moaned, picked at herself and said she was nearly dead. Died two months later. Fibrosarcoma in right cerebello-pontile angle.

16. Hemiplegic, almost blind and markedly aphasic. Most of the time no apparent appreciation of her condition but at one time said she had become paralyzed following a whipping at the age of 13. She lived for 30 years after the onset of the hemiplegia and died at the age of 56. Angioma of circle of

Willis invading the left temporal, parietal and frontal convolutions and filling the left ventricle.

17. "Nothing wrong with my mind." Dull, preoccupied and drowsy. Died six months later. Sarcoma beneath left temporal cortex extending into basal nuclei.

18. Realized there was something wrong with his mind but was hopeful of recovery. Thought pain in head was due to being struck with a log. Died three months later. Glioma beneath right temporal convolutions invading optic thalamus and lenticular nucleus.

Summary and Conclusions.

Of more than 1000 verified cases of brain tumor gathered chiefly from the literature a digest has been made for the purpose of determining to what extent the psychiatrist may contribute to the diagnosis and the localization. The more general manifestations of brain tumor may be summarized in the following manner:

In addition to the commonly observed phenomena such as headache, nausea, vomiting, vertigo, convulsive seizures and papilledema there are certain manifestations of brain tumor which are of special interest to the psychiatrist. These vary greatly according to the stage of the illness. Among them are periods of irritability, restlessness and violence alternating with psychomotor retardation, confusion or somnolence; a succession of apparently neurotic complaints, apprehension, depression with suicidal impulses and finally euphoria or apathy; crude as well as highly elaborated hallucinations which are more often visual in type; a sequence of increased intracranial tension, retardation of psychomotor activity, attention and concentration difficulties, mild confusion, impairment of retention, defective recent memory and finally loss of remote memory; and associated with these changes are degrees of insight varying from a full realization of the illness to an euphoric blindness regarding an obviously grave condition.

In the early stages of the illness the reactions are determined more by the type of personality affected but as the disease progresses the manifestations are increasingly those of organic disease of the brain. They are then dependent upon the location and rapidity of growth of the tumor as well as upon the degree of intracranial hypertension. Terminal organic dementia is the result of prolonged

and high degrees of intracranial pressure as well as the neoplastic destruction of the brain.

Intracranial hypertension is manifested by depression, anxiety, and physical distress, particularly referable to the head, alternating with somnolence or euphoria or with disorientation, memory disorders and lack of insight. It would seem as though nature had provided a means of escape from intolerable suffering through a state of euphoria, somnolence or a disorder sensorium. Memory disorders and loss of insight were found to be dependent in large part upon the capacity to maintain contact with reality.

The phenomena more often observed by the psychiatrist which have considerable localizing value may be grouped according to the site of the tumor as follows:

Frontal Tumors.—Psychotic reactions common and most closely resemble the functional psychoses. Symptoms often suggest general paresis or, later in the illness, the advanced stages of organic dementia. Euphoria in marked contrast to actual condition; silly clownish pranks and pointless, crude joking; loss of former social vocational and moral standards of living; and gross memory disorders with confabulation. In later stages incontinence of urine and fæces more common than with tumors in any other region. This incontinence is due to attention defects and apathy. A perseverated grasping reflex is occasionally observed. Grinding of the teeth especially during sleep is rather characteristic. Hallucinations of the auditory type more common than of the visual type. Various kinds of aphasia with tumors situated contralateral to the hand most freely used. Cranial nerves not involved except through intracranial hypertension.

These manifestations often appear before there are any neurological signs or even before the usual signs of intracranial hypertension are present. On the other hand in some cases there is little indication of tumor until the disease is well advanced.

Temporal Tumors.—Very unpleasant olfactory and gustatory hallucinations often preceding epileptiform attacks or their equivalent dream-like states. Highly organized visual and auditory hallucinations, the visual hallucinations being much more frequent. Apraxia chiefly with tumors of left side.

Parietal Tumors.—A kind of astereognosis in which the patient not only is unable to recognize the shape and nature of familiar

objects with the hand contralateral to the lesion but he also retains no memory of their size, shape or form. Aphasia and apraxia with tumors situated contralateral to the hand most freely used.

Occipital Tumors.—Crude visual and auditory hallucinations. Blindness without insight is not uncommon. Careful examinations may disclose a succession of homonymous hemiachromatopsia, hemianopsia and visual hallucinations in the defective field and therefore referable to the side opposite to that of the tumor. This may be observed also in temporal tumors.

Cerebellar Tumors.—A drunken, staggering or reeling gait with a tendency to fall toward the side of the lesion. Mental disturbances appear relatively late, usually after neurological signs have been observed. These disturbances are dependent upon prolonged and high degrees of intracranial hypertension. On account of the late development of mental symptoms the patient is harassed for a longer period with the growing realization of the actual condition than is the case with anterior cerebral tumors.

Corpus Callosum Tumors.—Manifestations often resemble those of frontal tumors but there also may be temporal or parietal symptoms.

Basal Tumors.—Manifestations in the form of somnolence, disorientation, memory disturbances or stupor appear early and continue most prominent. Tumors of the third ventricle, and basal ganglia give rise to choreoathetoid movements, rigidity, tremors, tonic and clonic convulsions, hemiparesis and involuntary laughing and crying. Occasionally the cries and howling of animals in distress are observed. The clinical picture often closely resembles catatonia, paralysis agitans or a post-encephalitic parkinsonian syndrome. As a rule the patient tends to be immobilized, has a mask-like face, drools saliva, maintains a stooped position and sometimes has a propulsive gait. When overactive he is likely to be irritable and impulsively aggressive. If the pituitary gland is involved there are of course the usual manifestations of dyspituitarism.

Ponto-Medullary Tumors.—Crude tactile hallucinations. As a rule the early symptoms of tumors in this region are referable to single cranial nerves and there is a long interval before other symptoms appear. Mental disturbances are due almost entirely to intracranial hypertension.

Supratentorial Tumors.—A tendency to move the head backwards has been observed. This retracted position apparently facilitates the flow of the ventricular fluid out of the third ventricle.

Subtentorial Tumors.—A tendency to keep the head bent forward is commonly observed. This flexed position facilitates the communication with the fourth ventricle but tumors in the posterior cranial fossa which grow towards the aqueduct sometimes cause retraction of the head. In many cases of unilateral cerebellar and extra-cerebellar tumors the head is slightly flexed to the side of the lesion and the chin is directed towards the opposite shoulder.

Much of the difficulty encountered in trying to arrive at the diagnosis and localization of a brain tumor arises from the fact that by the time the patient comes under observation the disease is already well advanced. There is little opportunity to observe the sequence of events especially in those cases in which the early symptoms are regarded as merely functional in origin. As a result the earlier manifestations which have greater localizing value have become over-shadowed by the more general symptoms of intracranial hypertension.

When this radical change in brain physiology has taken place frontal lobe symptoms may be obtained solely from the effects of the intracranial hypertension associated with basal tumors. Sometimes a tumor in a frontal lobe either by its location or its size may give rise to symptoms of a basal tumor through pressure upon the basal ganglia. At times the whole brain is displaced by a large neoplasm and the symptoms may be referable to regions where the pressure is greatest.

In spite of the manifold variations in the clinical picture due to the type of personality affected, the location and rapidity of growth of the tumor as well as to the complications which arise through the influence of intracranial hypertension, a study of a large number of cases gives data upon which certain general conclusions may be drawn. Some of these may be stated briefly in the following manner:

Neoplasms in the brain according to their location give rise to mental phenomena by which the evolution of the cephalic portion of the nervous system may be traced. In the ponto-medullary region mental phenomena are absent except for the late effects of intra-

cranial hypertension. At times there is a disturbance of tactile sensibility, *i. e.*, with one of the most primitive means of contact with the external world. This disturbance is manifested by the appearance of tactile hallucinations.

Neoplasms affecting the base of the brain are manifested by disturbances in growth as well as by peculiar and exquisite pain reactions. They give rise to automatic laughing and crying and to crude motor phenomena in the form of rigidity, tremor, choreo-athetoid movements, assumption of fixed postures, somnolence, stupor, inability to react to the presence of food in the mouth, drooling, automatic resistiveness, mutism and in general to the manifestations of parkinsonism or catatonia. Occasionally the howling or other cries reminiscent of a lower mammalian stage in evolution are observed.

Cerebellar neoplasms give rise to disorders in locomotion and the maintenance of posture and to distant pressure effects. The associated mental phenomena are about as crude as those of the ponto-medullary region.

The crude visual illusory and hallucinatory phenomena observed with lesions in the occipital lobes may be elicited directly through the growth of neoplasms or indirectly through increase of subtentorial pressure. These phenomena are less commonly observed because tumors of the occipital lobes are much less frequent.

As the frontal lobes are approached the mental phenomena observed are increasingly complex and highly elaborated. Neoplasms in the region of the fissure of Rolando disturb functions peculiar to human beings, such as reading, writing and speech.

On the other hand, lesions in the temporosphenoidal lobes, *i. e.*, those affecting the archipallium give rise to gross gustatory and olfactory disorders. In other words the response is a disturbance of primitive functions and of those senses upon which lower animals depend in their external contacts.

Neoplasms of the temporal lobes may be accompanied by both auditory and visual hallucinations. These are usually highly organized and resemble the visions and voices characteristic of the functional psychoses. In general it appears that lesions of the temporal lobes are prone to give rise to hallucinatory phenomena.

Thus far in the progression towards the frontal region visual hallucinations have been more common. When the frontal lobes

are affected however, highly organized auditory hallucinations are more frequently observed. In this respect there is a closer approximation to the psychogenic psychoses.

Neoplasms in the frontal lobes also produce gross personality changes and loss of the refinements in social contact which are characteristic of most highly civilized people. Destructive lesions cause a prompt regression to the mode of living characteristic of intracranial hypertension but when this is the sole factor the mental phenomena tend to fluctuate with the variations in intracranial pressure.

It is unfortunate that more original observations of brain tumor cases have not been made by physicians who have had thorough psychiatric training. Thus far the data reported in these cases tend to reflect the chief interest of the observer. Certain mental phenomena accompany the growth of brain tumors and often precede the appearance of neurological changes. It is essential that expert psychiatric observations be made in all cases and in general these observations are equally important to those of the neurologist in arriving at the diagnosis and the localization of brain tumor.

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(Including additional sources of material.)

KEY TO SYMBOLS.

AfP—Arch. f. Psychiat.
AJI—Amer. J. Ins.
AJMS—Amer. J. Med. Sci.
AJP—Amer. J. Psychiat.
AMP—Ann. Méd.-psychologiques.
AN—Arch. Neur.
ANP—Arch. Neur. and Psychiat.
ARNMD—Assn. Res. Nerv. and Ment. Dis.
AZfP—Allg. Ztschr. f. Psychiat.
B—Brain
BMJ—British Med. Jour.
BMSJ—Boston Med. and Surg. Jour.
BNI—Bull. Neur. Inst. (N. Y.)
JAMA—Jour. Amer. Med. Assn.
JfP—Jahrbücher f. Psychiat.
JfPN—Jahrbücher f. Psychiat. u. Neur.
JHB—Johns Hopkins Bull.
JMS—Jour. Ment. Sci.
JNMD—Jour. Nerv. and Ment. Dis.
L—Lancet.
MfPN—Monatschr. f. Psychiat. u. Neur.
MR—Med. Record.
NYMJ—N. Y. Med. Jour.
PQ—Psychiat. Quart.
RN—Rev. Neurologique.
RNP—Rev. Neur. and Psychiat.
RPnm—Rivista di Patologia nerv. e ment.

SAfNP—Schweizer Arch. f. Neur. u. Psychiat.
SHB—State Hosp. Bull.
WKW—Wien. klin. Wchschr.
ZfPN—Ztschr. f. d. ges. Psychiat. u. Neur.

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DISCUSSION.

DR. A. L. SKOOG (Kansas City, Mo.).—Dr. Henry should be congratulated in calling our attention to a very important aspect of neoplasms within the cranium—an aspect which should be observed by both the psychiatrist and the neurologist; perhaps their fields here overlap somewhat.

It is rather interesting, when you review the literature relative to mental phenomena in brain tumors, to note that many articles ignore them entirely, and even some of the larger monographs and textbooks devoted entirely to brain neoplasms, have an inadequate description of these manifestations.

Possibly you might question what is the *modus operandi* of the various psychotic manifestations as detailed to you by Dr. Henry; whether they are due to direct irritations of more or less extensive areas of the cerebral substance, cortical or pathways; to actual destructions by pressure or interference with the blood supply thereby producing ischemias and anoxemias in these regions. Then we must also consider the generalized pressures. Pressure may be local and it may be extended even to opposite hemispheres of the brain. Furthermore, you have to ponder the edemas which surround the brain neoplasm proper. That itself would tend to produce a generalized intracranial pressure. Quite important, I believe, is a consideration of the pressure produced by cerebral fluid circulation, such as an internal hydrocephalus, increased fluid in the various cisternæ and subarachnoid spaces.

The essayist has called your attention to the observation of early mental phenomena. Quite possibly some of these begin before a few of the well-known or cardinal symptoms of brain tumors. Particularly might I call your attention to headaches. It is entirely plausible that the headaches may cause mental manifestations, as in the type which continues over many days and in the frequently recurrent variety. We all know that headaches are often most violent in brain tumors.

In considering encephalalgia I wish to report briefly a case that I saw some years ago. The autopsy showed a large glioma of one olfactory bulb and extending in such a way as to produce pressure on the opposite olfactory bulb. Before this patient ever saw a physician he was complaining of violent headaches and was continuing with his occupation as a traveling salesman. Wherever he was known on his route he would be put to bed by the hotel men when having an attack, being considered simply an alcoholic case.

Usually he would remain in bed from two to five days. Here again, as Dr. Henry has called to your attention, rest improved this patient. Perhaps it was the rest alone that helped this fellow. He was subject to some additional peculiar attacks which were classified as epileptic in nature. I saw him only in the late stage when he showed very definite and rather marked mental deterioration.

I am pleased to note the high percentage of hallucinations and delusions which Dr. Henry has called to your attention, namely, more than 50 per cent; also, that of these cases, about 50 per cent were visual, 20 per cent auditory, 30 per cent olfactory.

I have seen beforehand Dr. Henry's paper which he undoubtedly abbreviated and I do not believe he read that portion relative to the percentages. I wish to call your attention to the fact that he reported various authorities showing that 40 to 100 per cent of the cases had mental phenomena. Possibly 100 per cent is too high, but certainly it is something over 50 per cent.

It is possible that in later years fewer cases with mental phenomena may appear because the general practitioner and the mental institutions are more alive to methods of earlier diagnosis. The neurologists have aided us in this respect. Therefore, the patients come to operation earlier and are relieved of some of their more embarrassing mental phenomena, particularly if they are restored fully.

I think every patient with a brain tumor is entitled to careful consideration for an operation, either to remove the tumor itself or to give relief by various measures.

I do not believe Dr. Henry discussed astereognosis, but in his paper he called attention to the fact that possibly now studies of the stereognostic sense are neglected somewhat. I agree with him in that respect. I can recall a few cases of my own where astereognosis was a valuable localizing sign. One patient on whom we demonstrated the accuracy of the diagnosis at operation, had astereognosis as the only definite localizing sign. This man was relieved for somewhat over a year and then went on with the extension of the glioma and died. Autopsy gave additional proof of the correct localization.

I was rather surprised to see the high percentage of suicides that Dr. Henry reported, namely, 10 per cent. That has not been my experience. I have in mind the literature reporting suicide in some cases. I can recall not a single instance of suicide in the cases that I have observed. I believe that suicides occur in frankly organic lesions in the brain less frequently, and that would include, of course, brain tumors. They are more frequent in cases of functional disturbance of the brain.

Dr. Francis E. Weatherby (Medical Corps, U. S. Army).—I was asked to discuss this paper, not because of any extensive knowledge of the subject on my part but probably because I have made worse mistakes than any other member of this Society.

The first mistake occurred about 12 years ago. A soldier came to me and his complaints were so indefinite and hypochondriacal that I thought he was malingering. After a few days of observation and neurological examination he was returned to duty. He came back two weeks later, this time with abnormal fatigability and weakness, feelings of inadequacy in general. At that time I *did* give him credit for neurasthenia but still thought the case functional. Two weeks later the patient again returned to us and this time he had a Babinski, but by this time the tumor had grown through the top of his head. It was not a very pleasant experience to have; and I have been particularly interested in the fact brought out by Dr. Henry, that mental symptoms do precede neurological signs in some cases. I think this is of far more practical value than the elaboration of a number of mental symptoms which are associated not only with tumor but also with other conditions.

Another mistake occurred in 1923, when we had a great number of parkinsonian syndromes following epidemic encephalitis. This patient apparently had a typical postencephalitic condition. There were no neurological signs that we would not expect to get with ordinary postencephalitic parkinsonism. There was no papilledema. I did a lumbar puncture on the patient, which might have been a mistake in itself but did not turn out to be, although he had a pressure of 38 millimeters of mercury. I thought that we had discovered quite high pressures in encephalitis, or postencephalitic conditions. However, two weeks later that patient was dead. Autopsy showed a glioma of the midbrain, situated low down, pressing on vital centers.

Within a year I have had occasion to observe another patient. This last experience was not completely a mistake because I merely sent the patient back to the hospital after consultation, remarking that he had some organic disease. This was a Veterans' Bureau patient who came to me with a history that he had been examined by the Veterans' Bureau doctors, that he had had a lumbar puncture and after that lumbar puncture they had told him that they could not do anything for him—a report which in itself, I think you will agree, suggested paresis. On examination, the condition seemed to *be* paresis. The patient had a slurring speech, increased reflexes, his pupils were sluggish and he complained of headache. I thought that we were dealing with either paresis or cerebral syphilis and was very much surprised to find both the spinal fluid and the blood negative. That patient was successfully operated on for brain tumor and is alive and quite well at the present time. I believe the tumor was located in the frontal area. It has been previously mentioned that frontal tumors do simulate paresis.

The most important points, from my own experience, as well as from the paper of Dr. Henry, seem to me to be: that mental symptoms may precede neurological signs in brain tumors and that together with other neuropsychiatric conditions, tumors may simulate neurasthenia, they may simulate parkinsonism and they may simulate paresis.

Dr. George W. Henry (White Plains, N. Y.).—I am grateful for the comments on this paper. I have been interested in this subject for many years, particularly in recent years when I have been asked to examine

patients with the neurologist. The neurologist would sometimes be uncertain because of lack of signs although there was evidence of organic disease in the mental phenomena. I became convinced that the psychiatrist could contribute a good deal to the diagnosis and perhaps to the localization of brain tumors. Having made this study I am now more certain that this is true.

One misunderstanding should be corrected. I did not say, at least I haven't it in writing, that suicides occurred in 10 per cent of the cases. I meant to say suicidal tendencies.

ERETHIZOPHRENIA AND KOLYPHRENIA.

A Physiological Conception of Psychological Types and Their Relation to Psychopathology.*

By J. RAMSAY HUNT, M. D.,
Professor of Neurology, Columbia University, New York.

The subject which I have chosen for presentation on this occasion is the problem of excitation and inhibition in the central nervous system and the importance of these two processes in determining psychological types and their related manifestations in the realm of psychopathology. I shall endeavor to lay the foundation for the conception that states of exaggerated cortical excitability (erethizophrenia †) and cortical inhibitability (kolyphrenia) are the important factors in the manifestations of psychological type and many of the disorders of mental function which we encounter in abnormal psychology. And while this does not constitute an explanation of the cause and nature of these manifestations, it does offer a physiological approach to this important and very complex field.

My interest in this question extends back over many years of neuropathological investigations, and especially since 1923, when I postulated a specific cell theory of inhibition identifying this function with the small cells of Golgi (Type II) of the central nervous system.[1] According to this theory, all nerve centers, including those of the psychic level of the cerebral cortex, are composed of both erethitic and kolytic cells associated with the specific functions of excitation and inhibition. In recent years there has been a great development along purely psychological lines in both psychiatry and abnormal psychology, and it may be of interest to return once more

* The presidential address, delivered at the joint session of the American Neurological Association with the American Psychopathological Association, Atlantic City, New Jersey, June 8, 1932.

† Derived from the Greek:
Erethizo, to excite, to provoke, and *phren*—the mind.
Kolyo, to prevent to check, and *phren*—the mind.

to the fundamental biological principles of the nervous system and to consider the mind in its anatomical and physiological relations as a function of nerve cells. For the difference between the physiological activities of lower levels and the more complex phenomena of mental life is merely one of degree, as both are subject to the same basic laws which govern the functional activities of all nerve cells.

Anatomical Considerations.

The nervous system of man regarded from one point of view is represented by two great systems, the afferent and efferent, which together bring the organism into relation with itself and the outer world. This great sensori-motor mechanism regulates and controls all of the complex and manifold activities of life.

Regarded from another aspect, the nervous system is composed of an ascending series of physiological levels, representing the increasing complexity of neural integration and which correspond to the various stages of phylogenetic development. In this hierarchy of neural function each higher center controls and regulates those below.

The lowest level is the vegetative nervous system which regulates the activities of the vascular system, the glands and viscera. In close relation to this, but of a higher order, are the spinal and prespinal levels which control the manifold reflex motor and postural activities of skeletal muscles. Above this is the thalamo-striate level, composed of the optic thalamus a primitive center of feeling, and the striatum which represents a higher motor integration for the coordination of movement. Still higher is the pallium which contains the great motor and sensory projection systems of the cerebral cortex, which are situated below the internal granular layer, while above this layer is that portion of the cortex which so far as our present knowledge goes is chiefly concerned with psychic function.

All of these systems, physiological and psychological, represent the various stages in the evolution of the central nervous system of man. They are all sensori-motor in character and their various reflex activities form a continuous chain from the simplest twitching of a muscle fibre to the highest realm of thought.

As Hughlings Jackson[2] said in his famous Croonian lecture, nearly fifty years ago—"If the doctrine of evolution be true, all nervous centres must be of sensori-motor constitution. *A priori*, it seems reasonable to suppose that, if the highest centers have the same composition as the lower, being, like the lower, made up of cells and fibers, they have also the same constitution. It would be marvelous if, at a certain level, whether we call it one of evolution or not, there was a sudden change into centers of a different kind of constitution. Is it not enough difference that the highest centers of the nervous system are greatly more complicated than the lower? Some years ago, I asked the question: of what 'substance' can the organ of mind be composed, unless of processes representing movements and impressions?"

Physiological Considerations.

When the nervous system is approached from a physiological view point, we find this intricate grouping of neurones is so arranged as to convey nerve impulses in two directions. There are sensory impressions which pass centripetally, toward the nerve centers, and other impulses which move centrifugally and cause the various expressive functions of the organism. Thus, man is brought into intimate relationship with the outer world, impressions from within and without motivating his various expressive activities.

Among the manifestations of the afferent sphere may be mentioned the various modalities of sensation, general and special, the perceptions and apperceptions. In the efferent sphere are all the various motor and postural activities. And as I have pointed out in a previous study,[3] thinking and belief in the psychic sphere are probably higher representations of movement and posture and belong to the efferent manifestations of the central nervous system.

In this series of ascending functional levels, the lower centers are the simplest and the most stable, while the higher centers are the most complex and unstable, and this is especially true of psychic functions.

I would emphasize again the essentially similar nature of these various activities of the nervous system at both physiological and psychological levels. At the symbolic level the functions of memory,

judgment, reason, will and thought are all dependent upon nerve impulses originating in nerve cells and subject to the same laws of excitation and inhibition as are those at physiological levels.

Indeed, when we regard the function of these myriads of nerve cells in their manifold modes of expression, it is clear that the basic processes of excitation and inhibition are the essential ones which govern the activities of this vast mechanism. The nature and interplay of these two processes, therefore, are of the first importance in an understanding of mental function.

Excitation and Inhibition.

Irritability is a universal property of living matter and in its inherent nature is closely related to excitability. Meltzer [4] has pointed out that suspension of physical activity or inhibition is also a characteristic of living matter. It is the nervous system, however, which represents in its most highly developed form these dissimilar and contrasting functions and the prevailing view today is that these two vital forces are both always in action and that it is the predominance of one or the other which gives rise to their respective phenomena.

In the nervous system, inhibition is a function of paramount importance; without it the whole sensori-motor mechanism would be in a state of continuous discharge in response to constant centripetal stimulation, while with it there are the well regulated and coordinated activities of the body-mind functions, working together as a whole, each higher functional level controlling those below. Over all these functions reigns the psychic level which directs all the voluntary activities of the body and is itself subject to the same laws of excitation and inhibition as lower levels.

The phenomena of excitation and the nature of the nerve impulses are still far from a final solution, but far more is known of this function than of inhibition which is still one of the mysteries of physiology.

Inhibition in the Vegetative Nervous System.

Inhibition as a specific function of the nervous system was first demonstrated by the Weber brothers [5] in 1846 in their classical experimental study of the vagus nerve. Since that time there has

been a gradual increase in our knowledge of this function in the vegetative nervous system. The experimental investigations of Gaskell [6] and Langley [7] have shown that the whole vegetative mechanism is composed of both inhibitory and excitatory fibers which cooperate in vegetative function, so that each viscus, gland and blood vessel has its respective inhibitory and excitatory nerves. The researches of Von Uexküll [8] on invertebrates also show clearly the existence of both inhibitory and excitatory nerves.

Langley's crucial experiment of nerve crossing, demonstrated clearly that the essential element in inhibition lies in the terminal nerve ending and not in the nerve cell or its fiber. For when the accelerator nerve of the heart is anastomosed with the vagus, its stimulation causes inhibition, the reverse occurring when the vagus is stimulated after union with the accelerator. This would appear to prove that the specific character of inhibitory and excitatory function does not depend upon the nerve impulse, but rather upon the activities of the nerve ending at its junction with the muscle cell.

The later experimental investigation of Loewi [9] revealed that the terminal end organ of the vagus when stimulated produces an inhibitory substance, which in itself has inhibitory properties and which laid the foundation for a humoral theory of inhibition. Still further light on the nature of these two processes was shed by Gaskell's [10] very ingenious experiments on the nerves of the heart, which showed that the vagus function is associated with electropositive and the sympathetic with an eletronegative discharge in the cardiac muscle. These findings have been confirmed from other sources and would explain in electrical terms many of the peculiar features of these contrasting functions.

INHIBITION IN THE CENTRAL NERVOUS SYSTEM.

In the central nervous system the problem takes on a somewhat different aspect. The early experimental work of the Russian investigator Setschenow,[11] showed the existence of an inhibitory mechanism in the cerebrum which exercised a control over the reflex centers of the spinal cord. It is to the work of Sherrington,[12] however, carried out with great singleness of purpose, over a number of years, that we are chiefly indebted for our knowledge of excitation and inhibition in the central nervous system. It would

appear from his studies of the integrative action of the nervous system that these two processes are present at different physiological levels of the cord and brain, including the Rolandic area of the cortex. A very special manifestation of inhibition is the reciprocal innervation which is characterized by a simultaneous relaxation of antagonists during muscular contraction, and which also plays an important rôle in the vegetative nervous system.

Magnus,[13] in his studies of the postural reactions, has also demonstrated the dual rôle of inhibition and excitation in the regulation of posture function. This interplay of contraction and relaxation, underlies the finer coordination of all movement and posture, as indeed all other expressive activities of the nervous system, for even in the psychic sphere evidences of reciprocal innervation are present in the suppression of one stream of thought in concentration upon another. As Bleuler has expressed it, regulated thinking is conditioned by the fact that the hierarchy of the leading thoughts inhibit all ideas not belonging to the theme.

THEORIES OF INHIBITION.

Many theories have been advanced to explain the nature of inhibition. One of these is the drainage or diversion theory advocated by MacDougal,[14] and which has found no confirmation in experimental physiology and the known nature of the nerve impulse. Here inhibition is supposed to follow from drainage of nerve currents into other channels.

One of the oldest theories advanced by Volkmann [15] was taken from the realm of physics. Here inhibition is regarded in the light of physical interference, the waves of nervous action reacting as do the waves of light and sound. Lucas [16] has recently utilized this theory in an attempt to explain the phenomena of central inhibition, based on the timing of the nerve impulse. The impairment or decrement theory of Lucas is also supported by Adrian,[17] who interprets inhibition as an extinction of the excitatory impulse at the synapse, which is regarded as the area of decrement. Another theory by Hering [18] is based on the intrinsic nutritive changes and the anabolic and catabolic activities of cells. Gaskell in his studies of cardiac function has given some experimental evidence in support of this hypothesis. Verworn [19] looks upon inhibition

as a prolongation of the refractory period and regards it as synonymous with the refractive state.

The theory, however, which finds the most favor at the present day is the synapse theory of Sherrington,[20] in which inhibition takes place at the synapse or point of union between two neurones. This junctional tissue is a membrane where the effect of the excitatory impulse is controlled, and implies the existence of afferent nerve endings, secreting an inhibitory substance and blocking the function of the excitatory ganglion cell. The synapse theory therefore indicates the site of the inhibitory process and its chemical nature.

It is rather a curious fact that while separate excitatory and inhibitory neurones are found throughout the whole vegetative nervous system, no such inhibitory nerves are recognized in the central nervous system. Here it is assumed that the nerve impulse is blocked at the synaptic membrane of the excitatory cell and there are no specific inhibitory cells.

In 1923, however, I proposed a *specific cell theory* of inhibition, based on pathological investigations of the corpus striatum, and which was the starting point of my special interest in this important function of the nervous system. These studies showed that the small cells of the neostriatum are related to the symptom chorea, and their destruction was associated with a loss of inhibition within this ganglion, and the appearance of choreiform manifestations. The axis cylinder processes of these small cells are quite short and end in the gray matter in relation to the ganglion cells of the great projection systems. I suggested that these endings of an inhibitory cell terminating on the cell membrane of an excitatory cell, constantly exercised an inhibitory influence, and that nerve centers are composed of both excitatory and inhibitory cells. As these small cells of Golgi are widely distributed throughout the central nervous system and exist in every aggregation of gray matter, including the granular layers of the cerebral cortex, the specific cell theory was postulated, thus bringing the mechanism of inhibition in the central nervous system into harmony with that of the vegetative system, where both excitatory and inhibitory neurones are already known to exist. My theory implies therefore the existence of both erethitic, or excitatory cells, and kolytic, or inhibitory cells, in the central nervous system, belonging respectively to Type I and Type II of Golgi's classification.

In regard to these various theories it is only fair to say that none of them has been proved and the real nature of inhibition and its localization are still undetermined. It is, however, a well defined function of the nervous system occurring in all it parts, and responding like excitation to reflex stimuli, and the will, and it is to the influence of these two processes on psychic phenomena that I now ask your attention.

Inhibition in the Psychic Sphere.

The credit for the physiological exploration of these two functions in the psychic sphere belongs to the distinguished Russian physiologist Pavlov.[21] For the past quarter of a century he and his coworkers have pursued this problem with untiring zeal, using the conditioned reflex as the method of approach and developing an objective method for the investigation of mental function. Their results suggest that the highest psychic activities of the cortex are rigidly determined by well defined physiological laws.

According to these views, the cerebral cortex represents a huge functional mosiac made up of shifting points of excitation and inhibition, closely intermingled. Here environmental changes establish now positive, and now negative, conditioned reflexes and determine the outward manifestations of every day behavior. All have definite representations in the cortex in one or another group of cells. Sleep he regards as a state of inhibition which has irradiated over both hemispheres. Areas of inhibition in the alert state he regards as nothing but minute scattered areas of sleep. All habits based on training, education and discipline he regards as a long chain of conditioned reflexes, formed during the life of the organism. These original and fundamental views of psychic function are based on the most carefully controlled physiological experiments on dogs, he having selected these animals as the most suitable for his investigations.

Pavlov made another extremely interesting and important observation, viz.; that there is a wide variation in the nature of the individual nervous system in his experimental animals and that two definite types stand out with special prominence. He states that:

> In the elaboration of conditioned reflexes, both positive and negative, we observe in dogs enormous differences in the speed of formation of these

reflexes, in their stability, and in the degree of absoluteness they attain. In certain animals it is easy to produce positive reflexes, and these reflexes are stable under varying conditions; but in these dogs, it is very difficult to elaborate inhibitory reflexes, and in some animals it is impossible to obtain them in pure and exact form, for the reflex will always contain an element of positive activity. This is the characteristic of one group.

At the other extreme, however, there are animals in which the positive conditioned reflexes are formed with great difficulty, are highly unstable, and become inhibited by the slightest change in the surroundings, *i. e.*, they lose their effectiveness. The inhibitory reflexes, on the other hand, are quickly formed and remain stable.

Thus certain animals are specialists, as it were, in excitation, but failures in inhibition, while others are specialists in inhibition, but weak in excitation. Between these extremes there is a central group which can inhibit well, and at the same time easily form positive conditioned reflexes, and both the positive and negative reflexes remain constant and exact. Consequently all dogs fall into three chief groups: an *excitatory group*, an *inhibitory group* (extreme groups), and a *central group*. In the last, the processes of excitation and inhibition are equilibrated.

Pavlov also called attention to the resemblance of these canine types to the choleric and melancholy temperaments of the older writers, and described various nervous reactions which he encountered among them which suggested the neuroses in man. He also emphasized the possible relationship of such disorders of cortical function to certain of the psychoses in man.

Erethizophrenia and Kolyphrenia.

(Types of psychic excitability and inhibitability in man.)

That such physiological differences do exist in the cerebrospinal and vegetative nervous systems of man are shown by variations in the speed and intensity of reflex responses and reactions to certain drugs.

The vagotonia and sympathicotonia of Eppinger and Hess [22] reveal the presence of innate constitutional tendencies indicating different degrees of excitability and inhibitability in the vegetative mechanism.

That similar differences exist in the psychic sphere is also very evident, for while the processes of excitation and inhibition share in all neural functioning, some individuals are from birth more excitable, while others are more inhibitable, and these differences are no doubt related to chemical, glandular or metabolic activities of an obscure constitutional nature.

When a psychological organization is of the excitable type this tendency would be increased by use and habit formation, and the same would hold true for the inhibitable type. So that in time, the dominating function would assume an ever increasing importance and tend more and more to determine the reactions of the individual.

The theory that specific inhibitory cells exist throughout the central nervous system would provide an organic background for these two types, based on the existence of both excitatory and inhibitory neurones.

In May, 1928,[22] I presented a preliminary report on the existence of two fundamental psychological types, an excitable or erethitic and an inhibitable or kolytic, based on the predominance of one or other of these opposing functions in the psychic sphere.

The *erethitic* type is characterized by a great activity of mind and body. Such individuals are very responsive, impulsive and easily excited. They are quick tempered, highly emotional and inclined to be restless. They are mercurial, and rather rash and hasty in action. Their psychic tempo is rapid, with a lessened power of concentration and a tendency to distractibility. They live more in action and the outer world of reality than in the inner world of thought. The general trend of this type is toward action and expression. They are, as a rule, friendly, accessible and sociable. All of these tendencies are related to a ready reaction of excitability to the stimuli of every day life.

The *kolytic* type, on the other hand, is more calm and controlled, with a greater passivity of mind and body. Such individuals compared with the erethitic appear cold, apathetic and indifferent. They are self centered, often heavy and plodding, but when more energetic manifest a quiet concentration of power. They are slow tempered, and reflective with a marked tendency to subjectivity and day dreaming. The psychic tempo of this type is slow. They are the thinkers, the dreamers and visionaries, and show a distinctly repressive tendency and are inclined to be shy and reserved. Here, in contrast to the other type, the tendency to inhibition and control is very striking.

These two types, I believe, are expressions of exaggerated excitability and inhibitability in the psychic sphere; but in addition to these well defined types based on a predominance of function

there is the large middle group in which these two processes are more harmoniously balanced and where there is no special tendency to excess in either direction.

At this point I cannot refrain from quoting a delightful description bearing on this subject from the Psychology of William James.[24] In his chapter on the will he recognized two opposing types, the explosive and the obstructed type of will, which reveals in the sphere of volition the opposing tendencies which I have outlined. According to James, there is a normal type of character, with an explosive will, "in which impulses seem to discharge so promptly into movements that inhibitions get no time to arise. These are the 'dare devil' and 'mercurial' temperaments, overflowing with animation, and fizzling with talk, which are so common in the Latin and Celtic races, and with which the cold-blooded and long-headed English character forms so marked a contrast. Monkeys these people seem to us, whilst we seem to them reptilian. It is quite impossible to judge, as between an obstructed and an explosive individual, which has the greatest sum of vital energy. An explosive Italian with good perception and intellect will cut a figure as a perfectly tremendous fellow, on an inward capital that could be tucked away inside of an obstructed Yankee and hardly let you know that it was there. He will be the king of his company, sing all the songs and make all the speeches, lead the parties, carry out the practical jokes, kiss all the girls, fight the men, and, if need be, lead the forlorn hopes and enterprises, so that an onlooker would think he has more life in his little finger than can exist in the whole body of a correct judicious fellow. But the judicious fellow all the while may have all these possibilities and more besides, ready to break out in the same or even a more violent way, if only the brakes were taken off. It is the absence of scruples, of consequences, of considerations, the extraordinary simplification of each moment's mental outlook, that gives to the explosive individual such motor energy and ease; it need not be the greater intensity of any of his passions, motives, or thoughts. As mental evolution goes on the complexity of human consciousness grows even greater, and with it the multiplication of the inhibitions to which every impulse is exposed. But this predominance of inhibition has a bad as well as a good side; and if a man's impulses are in the main orderly as well as prompt, if he has courage to accept

their consequences, and intellect to lead them to a successful end, he is all the better for his hair-trigger organization, and for not being 'sicklied o'er with the pale cast of thought.' Many of the most successful and revolutionary characters in history have belonged to this simple but quickwitted impulsive type. Problems come much harder to reflective and inhibitive minds. They can, it is true, solve much vaster problems; and they can avoid many a mistake to which the men of impulse are exposed. But when the latter do not make mistakes, or when they are always able to retrieve them, theirs is one of the most engaging and indispensable of human types."

The general characteristics which distinguish the erethitic and kolytic types may also be recognized in other psychological types, and especially in the classifications of Jordan, Jung and Kretschmer. This I would ascribe to the fact that all have the same physiological basis, although the modes of approach have been from entirely different points of view.

Jung's [25] types were differentiated on the basis of the movement of the libido and the direction of interest in the individual. The interest of the extravert is directed outward towards objective happenings and primarily those of the immediate environment. It is predominantly a ready reaction to environmental stimuli, and is, to my mind, dependent on the predominating rôle played by excitability in the central nervous system of this group of individuals.

In the introvert, on the other hand, the trend towards the object is reversed, and the attitude is one of withdrawal. The introvert type is governed by such subjective data and he interposes a subjective view between the perception of the object and his own actions which prevents the action from assuming a character that corresponds with the objective situation. This pause between apperception and action which Jung refers to, according to the concept which I am presenting is essentially inhibitory, and based upon an innate predisposition to inhibitability in the cerebral cortex.

Ten years prior to Jung's description, Furneaux Jordan,[26] described two distinctive character types which were very similar in their general attributes to those of introversion and extraversion. One he termed the *active,* or less impassioned type, the other the *reflective,* or more impassioned type. In one the tendency to action is extreme and the tendency to reflection slight, and in the other

the proneness to reflection greatly predominates and the impulse for action is feebler. Between these two extremes are innumerable gradations, and a third type in which the powers of reflection and action tend to meet in more or less equal degree.

The active type, according to Jordan, is sociable, serene, friendly and accessible, and corresponds to Jung's extravert. The reflective type is impenetrable and shy and resembles very closely introversion. Jung recognizes their similarity to those which he has described and gives to Jordan priority of description.

The cycloid and schizoid types of Kretschmer [27] constitute a personality foundation for the two great psychotic groups, the dementia præcox, and the manic-depressive psychosis. The great importance of his contribution is the evidence which is furnished of a relationship between body-type and mind-type.

Here again we have reappearing, two contrasting psychological types and the similarity between the cycloid and extraversion and the schizoid and the introversion is very evident and recognized by most observers.

It is, I believe, significant for the view that I have presented, that in all of these modern contributions, although approached from very different angles, two fundamental and contrasting types are recognized. These are all very similar in their general outline and essential characteristics and resemble the types which I have ascribed to an over excitability or over inhibitability of the cerebral cortex. This is true of extraversion and introversion, the cycloid and the schizoid, and the active and reflective types of Furneaux Jordan.

RELATION OF ERETHIZOPHRENIC AND KOLYPHRENIC TYPES TO PSYCHOPATHOLOGY.

It is also interesting to consider the relation of these two fundamental types of cortical functioning, to the more general problems of psychopathology. As a general principle it may be said that in one there are evidences of an increased activity and in the other a diminution or cessation of activity of the cortical cells.

Erethizophrenia.—A state of cortical excitability, which in its milder form is characterized by the erethitic type of temperament,

reveals in its more severe manifestations the various grades of manic reaction. In this group, the acute mental and emotional excitement, the flight of ideas, the distractibility, and excessive psychomotor activity, all show an extreme state of excitation of the cortical cells, uncontrolled and unregulated by the usual inhibitory mechanisms. This relation is even more striking when reversal occurs and the manic patient passes into the depressed and retarded phase. Here excessive inhibition has replaced the former excitement, and slowness of thought, depression and psychomotor retardation take their place. No better example of the extremes of these two processes could be asked than is manifested by the manic-depressive psychosis in its alternating periods of excitement and inhibition.

In a lesser degree, I believe, the tendency to extreme exhaustion and irritability of psychic functions which characterizes some neurasthenic states is also dependent upon an increased excitability of the nerve centers, congenital or acquired. A predominance of excitability with diminished inhibitability would render the cortical cells more vulnerable to environmental stress and stimuli and thus more liable to exhaustion. For inhibition is now regarded by most authorities as playing a constructive rôle in the maintenance of normal cell function, promoting and accelerating those reconstructive changes which are necessary for their recuperation.

Kolyphrenia.—States of exaggerated inhibitability of the cerebral cortex, in my judgment, play a much more important rôle in psychopathology than does excitability, largely because inhibition is so essential in the adaptation of the individual to the demands of civilization and the higher aims of life.

Roback[28] in his very interesting study of the Psychology of Character has laid emphasis on this point and believes that inhibition plays a dominant and decisive rôle in the formation of character. He defines character as an enduring psycho-physical disposition to inhibit instinctive impulses in accordance with a regulatory principle.

Rivers,[29] as a result of his collaboration with Henry Head, in studies of the afferent nervous system, has also emphasized the importance of inhibition in the cerebral cortex. He believes that control, or inhibition, belongs to the very essence of nervous ac-

tivity, and the lesson suggested by the study of sensation and reflex action is that the suppression by which experience becomes unconscious is only a special variety of the process of inhibition, common to every class of animal activity.

The inhibitory functions of the cortex underlying psychic life therefore play a fundamental rôle not only in the formation of psychological type and of character but also in the determination of many of the disorders which we recognize in psychopathology.

The kolytic, the introvert, or the schizoid type in the more exaggerated forms is the foundation from which many of the psychoneuroses and schizophrenias take their origin. Schizophrenia is a disease group in which there is a great preponderance of inhibition, and the multiple splitting of the psyche which occurs in this disorder may, I believe, be directly traceable to the exaggerated state of inhibitability which is present. Janet in his interpretation of hysteria and psychasthenia believed that dissociation of psychic function played the major rôle, a mechanism which is very closely related to inhibition.

In the large group of psychoneuroses it is now clear, since the pioneer work of Freud, that repression is an essential factor in the production of many of its psychic manifestations; and what is repression in psychology today but inhibition in the psychic sphere? Indeed, as I see it, the favorable results obtained by the method of free association is dependent in large degree upon the release of inhibition—a *disinhibition* at the psychic level—and the restoration of repressed impulses to normal expressions; and the mechanisms underlying such formulations as the complex, conversion, regression and dissociation may be regarded as closely related to the function of inhibition.

Therefore, a state of kolyphrenia carries with it a predisposition to the splitting and dissociation of psychic function which underly many of the manifestations of the psychoneuroses and schizophrenia. The erethizophrenia, on the other hand, is more closely related to manic and hypomanic states. The relationship of these types to disorders of mental function show a certain similarity to the schizoid and cycloid and their associated psychotic types as formulated by Kretschmer and is, I believe, another confirmation of the underlying physiological origin of both conceptions.

In *conclusion* the points which I would particularly emphasize are the following:

I. The cerebral cortex which is concerned with psychic function is subject to the same physiological laws of excitation and inhibition as are the lower centers.

II. While the nature and localisation of inhibition are still disputed questions there is neuropathological evidence supporting the theory of specific excitatory and inhibitory cells in the central nervous system harmonizing with the existence of such a dual mechanism in the vegetative system.

III. Two fundamental psychological types may be recognized—an *erethitic* and a *kolytic*—due to a predominance of one or the other of these functions in the psychic field.

IV. Exaggerated states of cortical excitation and inhibition, general or local, constant or transitory, are responsible for many of the well known disorders of psychic function. Manic states are related to an extreme excitability of the cortex and the repressive tendencies of exaggerated inhibitability are manifested in the dissociation and splitting of the psyche in the psychoneuroses and schizophrenia.

V. A state of exaggerated mental excitability may be designated *erethizophrenia* and that of exaggerated inhibitability, *kolyphrenia;* these terms indicating their relation to these two basic functions.

In attempting this provisional outline of a physiological conception of psychological types in man, I am well aware how much is still necessary to complete the picture. Are these differences dependent upon a predominance of specific cells which determine an excess of irritability or inhibitability? Or are they the result of an endocrine imbalance, due to the interaction of hormones which excite or depress chemical activity, or has it to do with obscure biochemical and metabolic activities of the cells themselves? These are all questions for the future.

Perhaps with an advance in our knowledge of the endocrine glands we shall approach nearer to a solution of the problem. We have all observed the contrasting changes in psychological function in states of hyperactivity and hypoactivity of the thyroid gland, and there are no doubt many other obscure activities of a similar nature, biochemical and metabolic, governing the function of nerve cells. When these are solved many of these questions

will be answered—until then it is well to emphasize the existence of these two opposing physiological types as a basis for further clinical and experimental investigation.

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THE PILGRIM STATE HOSPITAL.

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New York State needed a new institution to accommodate mental patients in the rapidly growing district about New York City. Existing demands were with difficulty being met by four hospitals, a fifth of moderate size (3500) was in the course of construction, and there were good reasons to believe that one outmoded hospital on land owned by New York City might have to be abandoned within a few years. That was the situation in 1927 when a new mental hospital was being considered.

The size of the institution was a matter of grave concern. Should several small hospitals be built or one sufficiently large to meet the need as then visualized. A demand for 10,000 beds could be foreseen but that number was not required when these decisions were being made; so it was determined to build an institution to comprise an intensive treatment group which would include a reception building, a diagnostic center and a general hospital for the acutely sick and four continued treatment groups, each accommodating 1500 patients.

How large a mental hospital should be, for many years, has been a topic of contention, and old copies of this JOURNAL contain interesting points of view, modified as time went on, and fairly complete accounts of the discussion provoked. In 1850 it was thought that "the highest number that can be with propriety treated in one institution is 250, while 200 is the preferable maximum," and in 1866 it was said that "the enlargement . . . . may properly be carried to the extent of accommodating 600." By 1908, 1200 to 1500 was thought possible, but 1000 was preferable, yet there were those who advocated larger institutions. The proponents of the large and of the small hospital had arguments which merit consideration but in the main those who proposed the smaller units seem to have given little consideration to the necessity of accommodating large numbers. A hospital should be sufficient for the

present demands and those foreseen for the immediate future and no larger. Construction in excess of requirements is wasted space and a hospital smaller than conditions require leads to subsequent enlargement likely to be disorderly, overcrowding or duplication. Fortunately the New York State Department of Mental Hygiene had considerable information at its disposal and it was possible to arrive at an understanding of the present needs, and there was experience on which to predict, with reasonable certainty, the demands to be made upon a projected hospital in the near future.

While the first year admissions to a new hospital were not likely to number 2000 patients, experience had shown a gradually increasing admission rate which would soon reach that figure. As the average hospital residence is about five years it was apparent that the institution should be five times the admission rate. Deaths and discharges would then provide for the admissions.

Where should the new institution be located? Westchester County is that portion of New York State, east of the Hudson River, immediately north of New York City. It contains large estates, thriving towns, and a considerable portion of the county is a watershed for New York City. To all but sanitary engineers there are esthetic objections to locating large institutions on a watershed. Rockland County, on the opposite side of the Hudson River, is also north of New York City, but it presents water supply and sewage disposal difficulties not easily overcome. The logical location seemed to be Long Island and an 1100-acre site was secured in Suffolk County approximately 35 miles from New York City. Long Island winters are relatively mild, the soil is sandy, excellent water from wells is available in unlimited quantities and sewage is disposed of easily. The railroad transportation facilities are good and there are large tracts of level land, presenting no foundation difficulties, upon which an orderly arrangement of large groups of buildings is possible. The new institution was therefore located on Long Island, and in honor of Dr. Charles W. Pilgrim, who for many years had served the state of New York and prior to retirement had been a state hospital commissioner, the institution was named the Pilgrim State Hospital.

For several years a committee of New York State institutional superintendents had considered types of structures suitable for

patients, employees and officers, and had adopted standard buildings. In planning the Pilgrim State Hospital this department therefore had the benefit of their deliberations. A bureau of research, established by the Division of Architecture, had excellent data and Mr. William E. Haugaard, the state architect, with his co-workers, was most helpful. All shared with the Department of Mental Hygiene a desire to make the new institution a useful, workable, economic unit.

Admissions from metropolitan areas with large foreign groups differ from those originating in smaller centers of population of racial homogeneity, and a survey indicated the classification shown below to be desirable.

	Per cent.
Reception group	10.0
Depressed and disturbed	22.5
Quiet and moderately disturbed	50.0
Feeble	12.5
Tuberculous	3.5
Acute medical and surgical	1.5
	100.0

As the other institutions serving New York City were overcrowded with residual continued treatment cases, and greatly needing relief, the first contracts were for buildings to care for the continued treatment cases.

Continued Treatment Groups.

Each continued treatment group comprises four patients' buildings surrounding a central dining room and kitchen. The ward buildings in size and shape are identical but the interiors are modified to provide the facilities needed by patients of various types. In each group there are accommodations for 248 mildly and actively disturbed patients, 416 infirm patients and 816 quiet continued treatment patients. No ward has more than 52 patients and no dormitory more than 10 beds. The wards for the actively disturbed have continuous flow baths, accommodate 31 patients, 11 of whom have single rooms, and 20 patients are in four dormitories, each of five beds. All dormitory capacities are rated on the basis of 50 square feet of floor space for each patient. Three

of these groups have been erected and are occupied, the fourth is under contract and will be completed within a few months. Each group has an occupational therapy center in the dining room building. The plot plan shows a square structure connecting the two halves of each building. Here are provided offices for the physicians, stenographers and supervisors, treatment rooms and accommodations for visitors.

Intensive Treatment Group.

Contracts have been let for the admission—diagnostic center—acute medical and surgical unit, a group of buildings closely related in work, hence connected by corridors, all being served by one kitchen. The admission building will accommodate 660 patients which provides for an average four months' residence for each patient admitted even when the admission rate is 2000 patients per year. It is expected that recoverable patients will not leave the admission service for it will have accommodations for patients of all types. The only reason likely to call for the removal of a recoverable patient from the admission building is the existence of tuberculosis or of an acute illness requiring a temporary residence in the general hospital. The diagnostic clinic, available to all patients in need of special diagnostic facilities and consultation with specialists, is a part of the admission group.

Medical Organization.

Pilgrim State Hospital will therefore comprise five groups, each under the direction of an assistant superintendent. The first group will be the intensive treatment service which will meet the needs of the entire institution. Each of the four continued treatment groups of 1500 capacity, two for men and two for women, will be in charge of another assistant superintendent. Each continued treatment service has accommodations for all types. This arrangement avoids the stigma which might be attached to a special group of buildings set apart for difficult cases. As each continued treatment group will be a hospital of 1500 patients, with identical subdivision of patient population, it will be possible to compare, one group with the other, the number of working patients,

the number on parole, the number of patients engaged in occupational therapeutic activities and the accidents and deaths.

The institutional layout includes a utility group, capable of expansion to a 10,000 limit, which at present supplies only the needs of the structures built and building. Pupil and graduate nurses have homes and there are structures both for single and married employees. The staff group, separated a short distance from the institution, furnishes individual quarters for all the physicians. It is proposed to add to this group a staff house for unmarried physicians, each set of quarters to consist of a study, bedroom and bath, and a somewhat similar structure for social workers and occupational therapists. There will be a common dining room for unmarried medical and non-medical officers.

The only additional function which the Department of Mental Hygiene now considers for the Pilgrim State Hospital is accommodations for tuberculous patients. Where these buildings will be located has not as yet been settled but it is thought that structures for tuberculous patients shortly will be desirable. As at some of the nearby hospitals frame buildings for the accommodation of tuberculous patients are in need of replacement the tuberculous group at Pilgrim may be larger than would be required by the admissions and the resident hospital population.

The Department of Mental Hygiene knows of no reason why a large hospital planned similar to Pilgrim State Hospital cannot effectively function and meet the objections of those opposed to large institutions. In the relatively small continued treatment groups at the Pilgrim State Hospital there should be no occasion for overlooking patients who are making progress towards recovery. The economy of having one power house, one storeroom, one laundry, one water supply and one bakery is apparent. Pilgrim State Hospital will have the advantage of the *esprit de corps* of a large institution and some, if not all, of the advantages of the small institution. In this large hospital there are but five patient kitchens, and cafeteria food service will be widely used. Underground passages permit patients to walk from the ward buildings to the dining rooms and these passages are being used to bring food to wards caring for patients unable to go to dining rooms. On these wards diet kitchens have been provided. Although cafeteria service is in operation the Department of Mental Hygiene

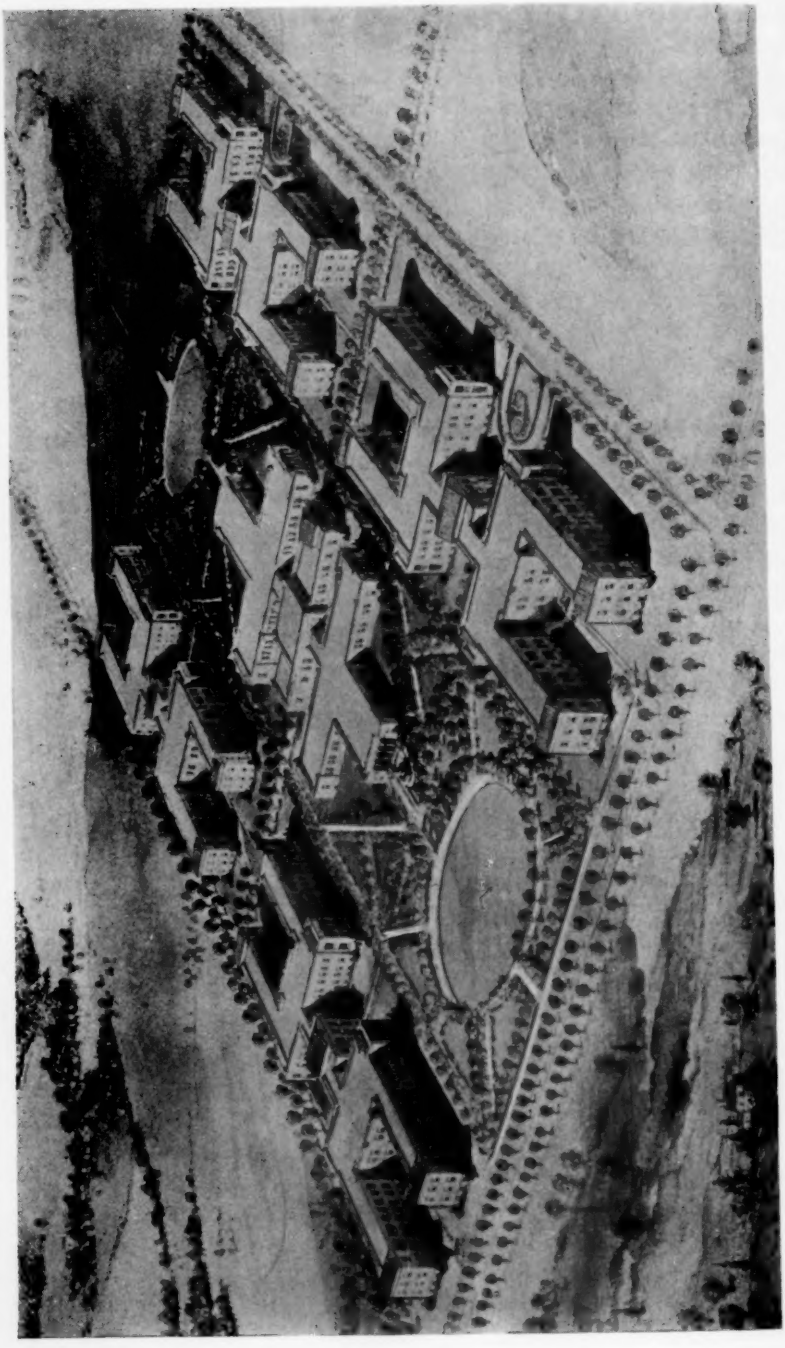
is not entirely satisfied with the existing underground passageways. The full benefits of cafeteria service cannot be had unless patients, upon the conclusion of a meal of varied duration, can filter to their wards unescorted. To obtain that desirable end entrance to and exit from the dining rooms should be by different routes. Then no confusion of traffic is occasioned. The construction of another set of corridors by which the patients can return to the wards would provide ideal conditions although the present confusion is not great and in pleasant weather the patients can go to the dining rooms above ground and return by the corridor route.

The reproductions of photographs, artist's rendering of architect's perspectives and sketches of typical floor plans will show the type of accommodations provided. The continued treatment groups are two-story buildings but the admission group is of three stories. All buildings are of red brick, of concrete flat arch construction with mission tile roofs. The architectural style is Lombardy. Much terrazzo flooring has been used and the structures are fireproof. Cheaper but less durable buildings with greater upkeep cost could have been built but the effort has been to provide first-class construction throughout. The buildings have cost $19,000,000. Sewage and water supply have cost $1,000,000, and nearly another $1,000,000 has been spent for the site, the railroad switch and roads, walks and grading. The certified capacity is 6800 but that allows a sleeping area of 50 square feet per patient which by some will be thought to be over-generous. In reality, to balance the 10 bed wards, two additional beds easily can be added. Patient population, 17 per cent in excess of certification, does not appear as overcrowding. The cost of buildings for patients, institution personnel and the utility group, based on the low certification, is $2710 per patient bed. The per capita cost of the entire enterprise is $3088, and giving effect to the 17 per cent excess which the institution easily will accommodate brings the cost down to $2637 per patient bed. Only an assembly hall and a structure for unmarried officers remains to be added and these may be possible out of existing balances.

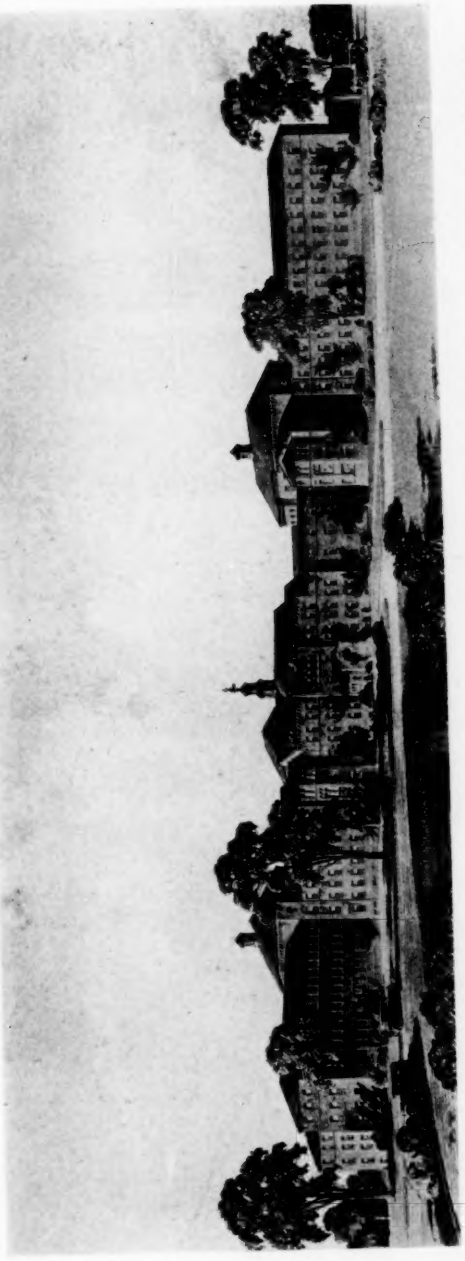
The New York State Department of Mental Hygiene does not believe the Pilgrim State Hospital to be a model institution, to be repeated in districts with low admission rates, neither does it

think districts should be expanded so that large institutions can be justified. It prefers smaller institutions, but when the conditions of a densely populated community make it necessary to provide for large numbers of patients it does not see how huge institutions can be avoided. Pilgrim State Hospital can be considered as four small continued treatment hospitals, which number can be increased if experience indicates that to be desirable, served by a central group of buildings in which every modern hospital facility is available. It is now functioning as a unit of the Department of Mental Hygiene. As this is being written it houses 2000 patients and by the time the article is printed more than 4000 patients will be in residence.

The department is fortunate in having, in Dr. William J. Tiffany, the former superintendent of Kings Park State Hospital, an active, able and experienced hospital administrator who was willing to allow himself to be persuaded to leave an established institution and assume the responsibilities of organizing and directing the Pilgrim State Hospital.



PERSPECTIVE OF ONE OF THE CONTINUED TREATMENT GROUPS OF PILGRIM STATE HOSPITAL

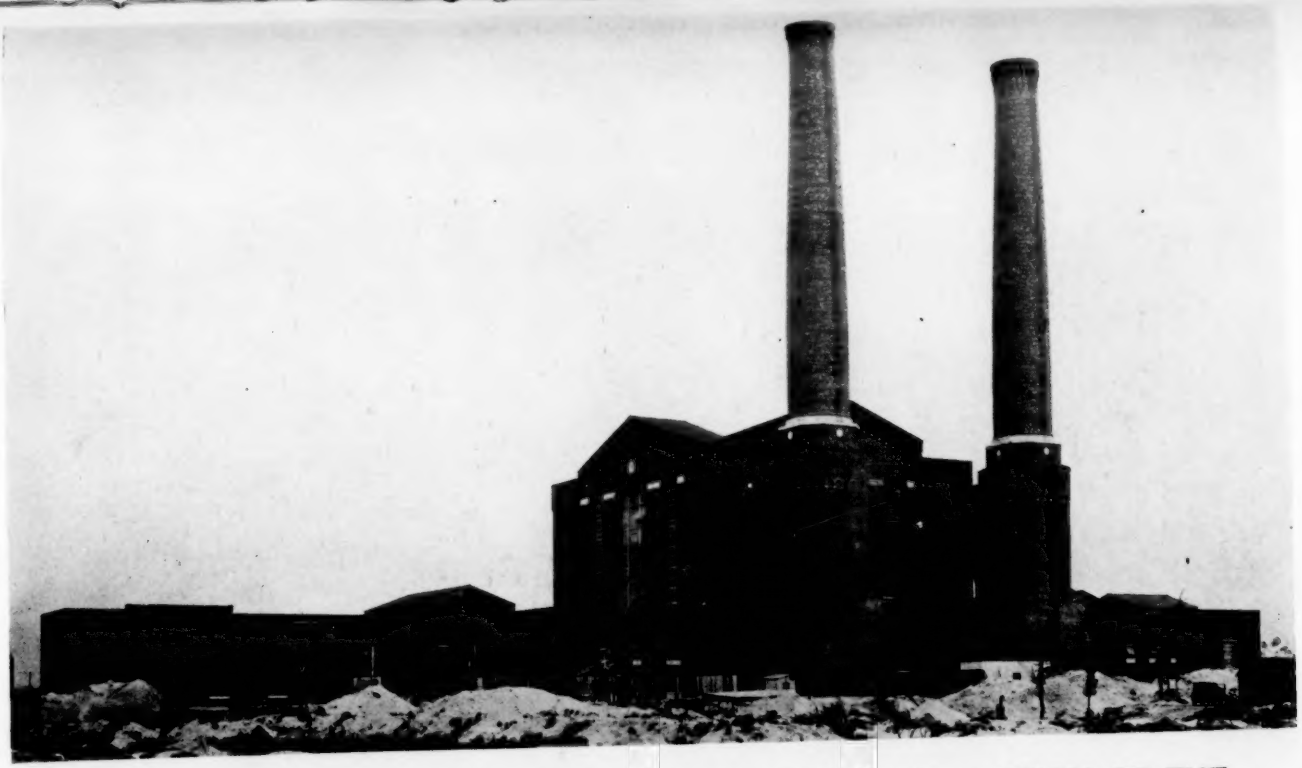


ADMISSION--ACUTE MEDICAL AND SURGICAL--DIAGNOSTIC CENTER GROUP

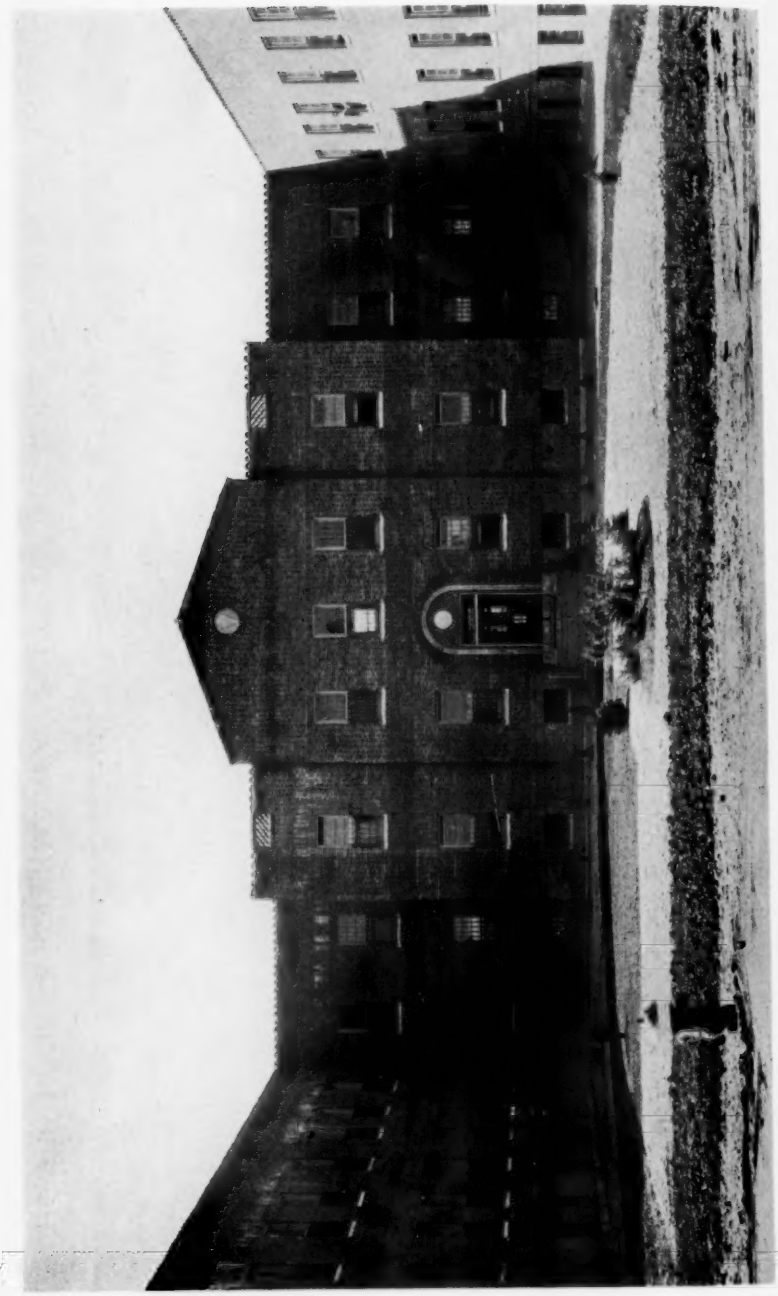
PERSPECTIVE OF ONE OF THE CONTINUED TREATMENT GROUPS OF PILGRIM STATE HOSPITAL

ENTRANCE TO A DINING GROUP

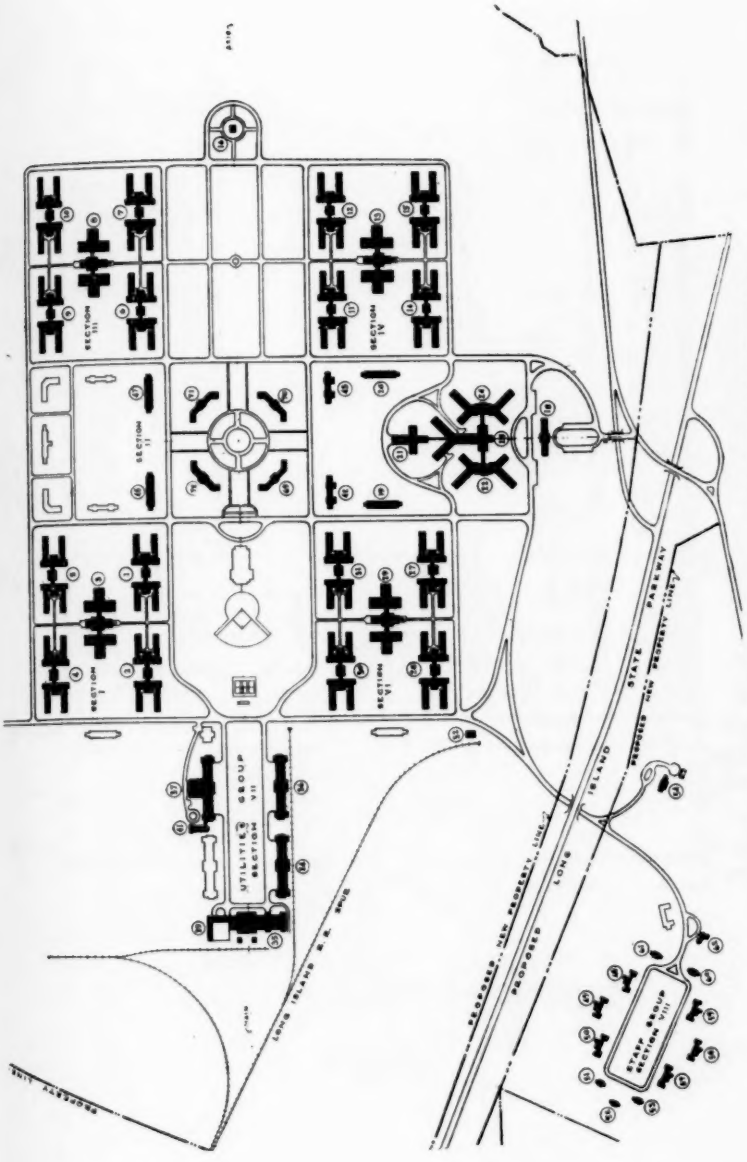
ENTRANCE TO A DINING GROUP



POWER HOUSE--FROM THE REAR PRIOR TO THE CONSTRUCTION OF THE COAL TRESTLE

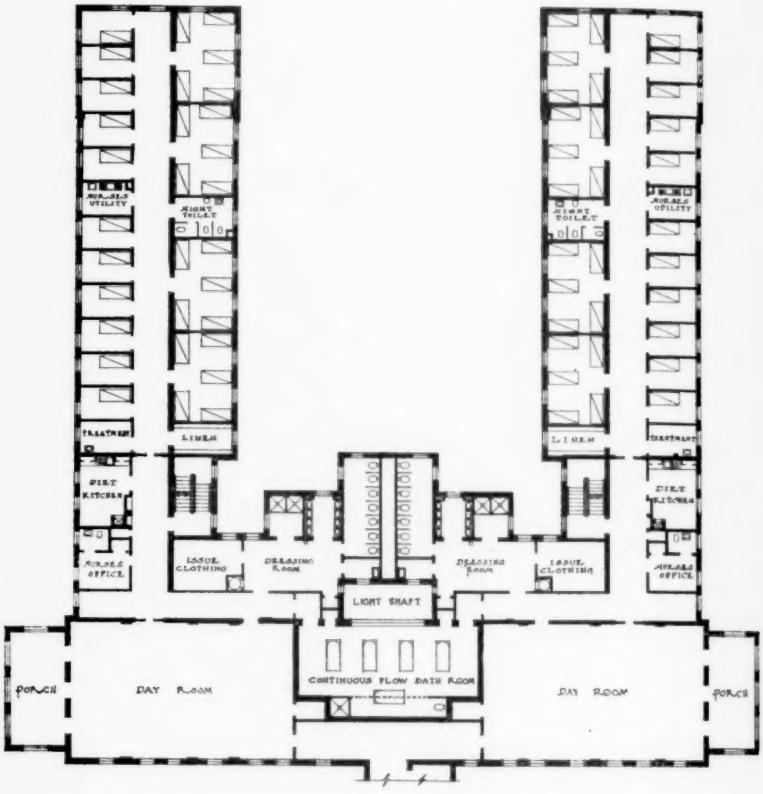


ENTRANCE TO A CONTINUED TREATMENT BUILDING

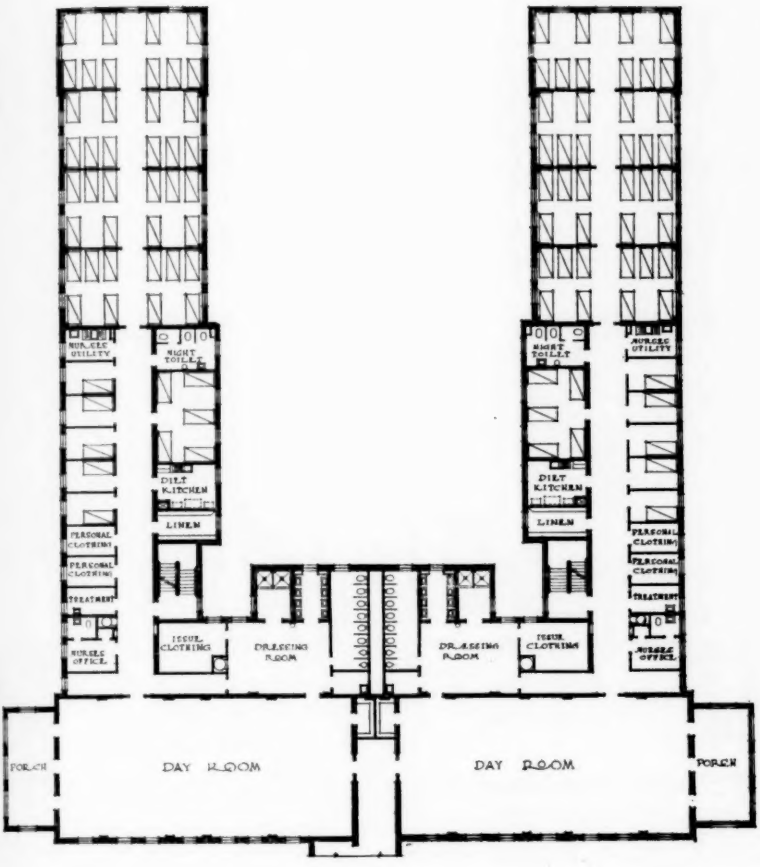


PLOT PLAN OF PILGRIM STATE HOSPITAL

ENTRANCE TO A CONTINUED TREATMENT BUILDING



2 TYPICAL WARDS FOR
DISTURBED·PATIENTS



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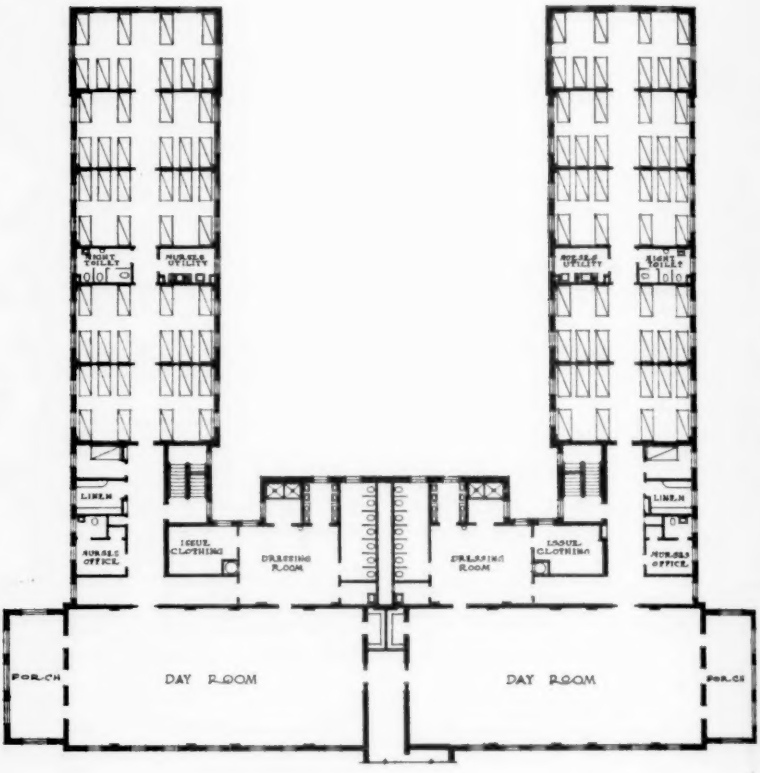
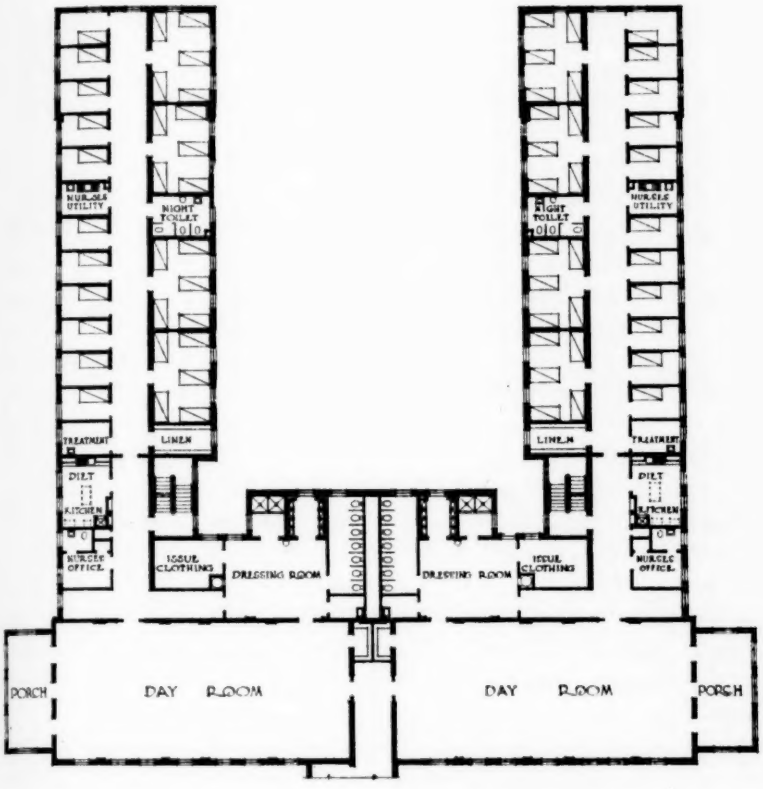
INFIRM PATIENTS



2 TYPICAL WARDS FOR
QUIET CONTINUED TREATMENT PATIENTS



2 TYPICAL WARDS FOR
MODERATELY DISTURBED PATIENTS

DELETION OF FUNCTION AND ADAPTIVE COMPROMISE.*

By DONALD GREGG, M. D., F. A. C. P.

Introduction.

The functions of the nervous system are to receive stimuli, to correlate and record them, and to react to them. Variations in range, quality and quantity of stimuli received, variations in recording and correlating ability, and variations in capability to respond to stimuli, are the foundation stones on which all brain activities rest whether we consider the idiot, the moron, the average, or the highly intelligent, the genius, the so-called normal, or the pathological.

At a meeting last fall to honor Dr. Walter B. Cannon on the completion of 25 years of service as professor of physiology at the Harvard Medical School, President Lowell remarked, "I take it that the progress of all science has been from structure to function. . . . . Surely this has been true of all sciences, except those of which the structure could not be observed at all, but could only be inferred from the function, such as chemistry and electricity, and I suppose that is why chemistry and electricity have been so late in their appearance among the sciences." Using this yard stick, psychology, behaviorism, psychoanalysis, and much in the field of psychiatry can hardly be considered as sciences.

Frederick Tilney recognizes the situation when he states in his Weir-Mitchell oration on the Structural Basis of Behaviorism, "Modern psychology may never hope to solve the problems which it has assigned itself without thorough biological studies of the body and particularly structural studies of the nervous system."

Thirty years ago, William James wrote in his "Psychology," "The delirium of fever, the altered self of insanity, are all due to foreign matters circulating through the brain or to pathological changes in that organ's substance. Bodily experiences therefore,

*Read at the eighty-eighth annual meeting of The American Psychiatric Association, Philadelphia, Pa., May 31–June 3, 1932.

and more particularly brain experiences must take a place amongst those conditions of the mental life of which psychology need take account. The spiritualist and the associationist must both be 'cerebralists' to the extent at least of admitting that certain peculiarities in the way of working of their favorite principles are explicable only by the fact that the brain laws are a co-determinant of the result. Our first conclusion then, is that a certain amount of brain physiology must be pre-supposed or included in psychology."

With these teachings of President Lowell, Frederick Tilney, and William James in mind, this paper is presented.

In Kraepelin's classification of the psychoses as modified by the New York state hospitals appear 20 groups as follows:

1. Traumatic psychoses.
2. Senile psychoses.
3. Psychoses with cerebral arteriosclerosis.
4. General paralysis.
5. Psychoses with cerebral syphilis.
6. Psychoses with Huntington's chorea.
7. Psychoses with brain tumor.
8. Psychoses with other brain or nervous diseases.
9. Alcoholic psychoses.
10. Psychoses due to drugs and other exogenous toxins.
11. Psychoses with pellagra.
12. Psychoses with other somatic diseases.
13. Involutional melancholia.
14. Epileptic psychoses.
15. Psychoses with mental deficiency.
16. Manic-depressive psychoses.
17. Dementia præcox.
18. Paranoia or paranoid conditions.
19. Psychoses with psychopathic personality.
20. Undiagnosed psychoses.

Running through this list it appears that the first fifteen groups or 75 per cent fall without much argument into the category of conditions having an organic etiological background.

The remaining five groups, 25 per cent, by some are classed as "functional"; but as patients in these groups are studied more carefully and skillfully, case after case is shifted into one of the previous groups. Although the great majority of diagnostic classes (75 per cent) imply an organic etiology, the great mass of mental cases occur in the remaining classes as is well known.

For many years pharmacologists have maintained that alcohol is at all times a depressant, and that when it seems to act as a stimulant it does so by depressing inhibitory centers. From this point of view, when the activity of inhibitory centers is decreased there is a deletion of function.

If one runs through the chapter of symptomatology in Henderson and Gillespie's Text Book of Psychiatry, one finds that about 80 per cent of the terms used deal with a deletion of function or a decrease in inhibition. Thus under bodily activity, stereotypy, perseveration, mannerisms, tics, negativism, automatic obedience, automatisms. Under stream of thought, volubility, circumstantiality, flight of ideas, distractibility, slowing, blocking, deprivation of thought, irrelevance, incoherence. Under emotional reaction, irritability, morbid anger, lability, emotional deterioration. Under thinking, difficulty in thinking, obsessive thoughts, autochthonous ideas, ideas of reference, ambivalence. Under disorders of the content of thought, lessened insight. Under orientation, disorientation of place and time. Under memory, amnesia, paramnesia, confabulation. Under attention, blunting. Under judgment, suggestibility.

Among the symptoms not included above are certain disturbances of affect which merge into non-psychotic reactions such as elation, exaltation, sadness, apprehension, apathy, and suspicion. Often these symptoms are secondary to somatic changes, to incomplete grasping of facts, or to delusions or hallucinations. Delusions are conclusions drawn from an incomplete or improperly evaluated group of facts or ideas. Hallucinations arise from a pathological sensory apparatus, from a false interpretation or evaluation of sensations received, or from abnormally persistent and dominating sensory stimuli.

In considering delusions and hallucinations, however, the examiner must avoid falling into the pitfall that gave rise to the remark—"Delusions and hallucinations are what the patient believes: the facts and truth are what the doctor believes."

Many of these symptoms in mild and transient form are familiar to us in fatigue. They become important when they are severe and dominating and, to use a chemical phrase, non-reversible reactions.

From the foregoing review of diagnostic and symptomatic terms it would seem to be evident that in psychiatry, we are dealing most

commonly with conditions in which a deletion of brain function is the important factor.

A consideration of the development of life and finally of brain function shows three important milestones.

1. Adaptation or adjustment.
2. The introduction of the factor of distance.
3. The introduction of the factor of time.

The first, adaptation or adjustment marks roughly the dividing line between the inorganic and the organic world. The inorganic can only react according to definite laws to maintain an equilibrium of forces. Water cannot freeze unless it expands, rivers cannot run up hill, objects fall to the earth, etc. Plants and animals, however, can grow in a new direction if thwarted along one line.

The second milestone, arising upon the introduction of the factor of distance, marks roughly the dividing line between man and beast. With rare exceptions only man uses tools and can produce results beyond the domain of his own reach. Rarely will a monkey or an elephant untaught use a stick to knock down food or accomplish some other purpose. With the utilization of tools to produce results beyond his own reach, man leaves the brute behind.

The third milestone concerns the introduction of the element of time. At first we have a simple stimulus and reaction. Soon we find multiple stimuli and reaction. Then stimuli, deliberation and a choice of reactions. This development marks roughly the dividing line between so-called emotional and so-called intellectual response. When we find deliberation and a choice of reaction we pass from the emotional field of stimulus and response to the intellectual field of deliberation and choice of response among various possibilities. In fatigue, sickness, deterioration, and death, we find man commonly retraces this development from the intellectual to the emotional, from the emotional to the vegetative, from the vegetative to the inorganic in death.

The tired individual with a lessening of the time element, becomes irritable, impulsive, "acts without thinking." The deteriorating individual narrows his interests and activities commonly to those dealing mainly with his own physical activities, the vegetative derelict would soon die if another did not supply activities beyond his own motor reach.

Our extraordinary success in eliminating or at least telescoping the factors of distance and time in our human relations by new mechanical inventions is common knowledge.

What the effect of these developments is and will be upon our mental activities and growth is a fascinating field for speculation but beyond the scope of this paper.

Admittedly they have elements of increased complexity and strain. How can we solve the dilemma arising from the necessity of taking time for deliberation to maintain our intellectual activities, and eliminating time in order to keep up with our environmental demands?

Tilney has shown from his studies of the brains of various species of animals in prenatal and postnatal existence, that we cannot expect function until structures have developed and matured making such functioning possible. Although he has not yet defined the cortical areas, it is logical to assume that there are certain parts of the cortex devoted to the correlation and evaluation of stimuli arising from the functioning of the body and possibly from an adjustment to the external environment. If such centers exist it is interesting to speculate upon the part they may play in the development of the euphoria and cacophoria of the affective psychoses, and the lack of drive and maladjustment that characterize the schizoid reaction type.

Perhaps this seems too materialistic to some, but surely we can well hesitate to wander too far from the materialistic when we find the physiologist now able to play a tune into a cat's ear, tap the auditory nerve, pick up the electric current thereby generated, amplify it, and reproduce the tune again in a loud speaker!

In recent years great stress has been laid on the interpretation of the pattern of behavior that a patient with a deletion of function shows in an attempted adjustment to his environment. This interpretation of the pattern of behavior adopted by the patient has doubtless been of inestimable value to us in the care of our patients.

With one psychiatrist to seven hundred patients in our hospitals as the statistics show, and while the layman's attitude of terror and shame regarding mental disease persists, bringing the patient to us so late that often little remains to be done but help the patient to adjust as well as may be to his handicap, the care of the patient will remain for most of us the absorbing problem.

Between the patient's adjustment to deleted function, and the etiological cause of the condition there remains a large hiatus.

For example, Mary Jones is not psychotic but she will not go in swimming with the other girls or act in theatricals. Very slight analysis of the situation discloses the fact that Mary is markedly bow-legged. No matter how detailed and exhaustive the analysis of the pattern of behavior that Mary has adopted, can we expect from this angle of approach to get any light as to the etiology of the rickets that afflicted Mary in her babyhood? Again, Henry Brown wants to buy me a Rolls-Royce and give me a check for a million dollars. The discrepancy between his expressed wishes and his realization of his true bank balance causes me no surprise when I find that his spinal fluid shows a positive Wassermann reaction. The euphoria and loss of good judgment due to the activity of the spirochæte, cannot be ameliorated by any analysis of Henry's behavior. Or perhaps old Mrs. Smith accuses her successive maids of being thieves and liars. To call her paranoid or senile or carefully study her pattern of behavior does little to turn the clock back, lessen her birthdays, and unsnarl the environmental complications caused by her increasing arteriosclerosis and memory failure. Or again, Helen White, inadequate to meet the complexities of mature life with a meager equipment of mental resources has retired to a world of fantasy wherein she can live seemingly more happily. To her, her mother no longer exists and when we tell her that her mother has broken her leg she laughs and shows no interest. We say "loss of affect," but granting the premise of her world of fantasy, is her reaction not more normal than it would seem? Thus I could elaborate with case after case.

The point that I am trying to bring out is this: No matter what the varying terminology of diagnosis, no matter how elaborately the pattern of adjustment is studied, the progress of our knowledge as to the etiology of the psychoses and as to their prevention will be slight. We must study bodily experiences and more particularly brain experiences to understand the mental life of our patients. These studies naturally include trauma, the acute and chronic infections, glandular defects, dietary deficiencies and physiological chemistry, including of course such recent additions to our resources as the oxygen tent, and the apparatus for producing hyperpyrexia.

To characterize a given patient as schizoid or cycloid, defective in his reactions to his environmental stimuli or to his somatic stimuli, or to consider him as egoistic or altruistic is perhaps a step in the right direction but is not the whole problem. We must try to increase our power to discriminate between deletion due to organic defect, or destruction, and temporary deletion due to temporary noxious agents. We might do well to investigate our cases in terms of modification of function as regards incoming stimuli, synthesis and evaluation of stimuli, recording of stimuli, and modification of response to stimuli, as effective therapeutic adjustment often hinges on these factors rather than on immediate conduct disorders.

In these directions, I believe, lie vast unexplored fields for the amelioration and prevention of the psychoses. The three great handicaps to the progress of medical science are ignorance, superstition, and dogma. Ignorance is lessening. Superstition is diminishing. We shall do well to hesitate to substitute new dogmas for old ones, and think thereby to make progress.

Conclusions.

1. Seventy-five per cent of our diagnoses in the psychoses imply the deletion of function from organic causes.

2. Eighty per cent of our symptomatic terms involve deletion of function.

3. In our enthusiasm in studying the interpretation of the patient's behavior (often interpreted in too subjective a manner) we are neglecting the rôle of deletion of function in producing such conduct and we are often forgetting entirely the causes of such deletion of function wherein primarily lie our best hopes for amelioration and prevention.

4. To substitute new dogmas for old ones is of questionable value to the progress of medical science.

5. We must not forget the Hippocratic dictum, "To know is science, but merely to believe one knows is ignorance."

DISCUSSION.

Dr. Robert B. McGraw (New York City).—Dr. Gregg voices an attitude in clinical psychiatry which has only recently been very evident; by some it is considered reactionary. Many, however, consider it only as facing facts squarely.

Several varieties of what might be called speculative psychiatry and of autistic psychopathology have been conceived and have grown to considerable size. Some of them can be likened to neoplasms. They have a connection with valid conservative psychiatry. They received their origin there but their growth has become wild and uncontrolled, sometimes definitely cancerous.

This year is certainly one for facing facts and not one for indulging in fantasies, although it is understood, to be sure, fantasies do have great value. We are bound this year to be practical, we must come down to earth. We must relate ourselves to cold, practical facts.

Dr. Gregg's paper has emphasized these matters. It also emphasizes the value of fostering healthy superficial adjustments. Much of medicine is concerned with fostering superficial adjustments. It sometimes finds its chief value in this and it more than occasionally happens that when these superficial adjustments are favored, deeper and more fundamental changes occur. Not always is this so, but certainly sometimes. The conceptions of vast unconscious stores of motives and of buried archaic trends are fascinating and probably valuable but one sometimes lets loose the whirlwind and the volcano by probing for them. That even the best trained and cleverest can do this has been many times demonstrated. I may be criticized for using the word "probing" and it may be said that material obtained by free association cannot be harmful. I would say in answer to that, that no association is free and that we must even sometimes foster repressions and suppressions.

We should not neglect the more practical aspects of psychopathology even though they may perhaps be "old stuff," and not quite so intriguing or dramatic. The super-specialist who won't relate himself to ordinary problems and "won't play" unless he can have the exact type of case that he is interested in, is sometimes a good deal of a nuisance in a clinic and in a hospital, and I think loses great chances of broadening his own education by this point of view.

The examples of cases cited by Dr. Gregg are, I think, quite apt. It would seem to me to be good treatment to tackle sometimes the superficial elements first, sometimes proceeding to deeper layers and sometimes by deliberate intention neglecting what may lie beneath. To consider deletion of function as a base for proceeding is not a hopeless or a helpless attitude.

Dr. Gregg remarks that there is a large hiatus between the patient's adjustment and deleted brain function and the etiology of the condition seen. There is likewise a tremendous hiatus between psychoanalytic therapy and the practical treatment of the thousands of psychotic patients, the tens of thousands of psychoneurotic, and the matter of preventing maladjustment generally. We should face these facts and strive to narrow this gap.

Dr. Gregg has faced us with some of these facts and has emphasized important avenues of approach to them.

DR. ADOLF MEYER (Baltimore, Md.).—I am particularly delighted with this paper because it seems to be one of those that cover the hiatus between supposed philosophy and real philosophy in the study of the facts and of the world as it is.

I cannot help feeling particularly pleased because it gives another version of what I am inclined to represent in perhaps unusual terminology, in terms of levels of integration. Dr. Gregg gives us an unusually clear and sane and sensible demonstration of a twentieth century type of "natural philosophy," a philosophy of practical life and practical thought and attack upon the facts as we see them and have to handle them.

What I feel is that we are bound to deal with units which have to be viewed as wholes but in which we are also able to single out parts and part facts, component features, and we have to begin with those which are perhaps most apt to be handled. But we have to give due consideration to those which we have to accept as limitations.

I should therefore like just to inject into the picture that Dr. Gregg has given the concept of the plastic and the nonplastic facts. It is perhaps a little better than to think at once in terms of deletion and destruction. After all, pathology is always a question of balance of the normal and the abnormal, the helpful and the damaging. The two features cannot be mentioned independently. It is a good thing to have the positive and the negative recognized with equal rights.

The plastic things and the nonplastic things have to be considered when we want to deal with as complex a thing as the whole of the human being.

I am exceedingly pleased with the fresh formulation of the matter which, as I say, represents twentieth century natural philosophy at its best.

Dr. E. Stanley Abbot (Boston, Mass.).—I think Dr. Gregg has outlined a very important point and I agree heartily with Dr. Meyer's characterization of it. It is one that has actuated me in my work for many years.

I think there are some corollaries from it that need to be brought out. It means, in the first place, that in the examination and treatment of patients, we have to consider not only what the patient does or says, but what the patient does not do that he would have done had he not been ill. That involves, of course, a necessary analysis not only of the environment but of the powers of adaptation which the patient has now and those which he formerly had.

Having found, for example, in a given psychosis that patients lack certain powers of adaptation which they had had previously then comes the question, as another corollary. Why do they lack them? I think that in the answers to that question there will be found, when pursued and analyzed, the chief difference between the psychoses and the psychoneuroses. I do not regard the manic-depressive psychoses, nor the dementia præcox or schizophrenia cases as functional. Structures are damaged and the functional changes are due to this damage. We do not know what the structural changes are, but I cannot help thinking that there are such.

The psychoneuroses I regard as having undamaged structures, but the psychoneurotic patients misuse some of their mental powers in various ways, or fail to use some of them. I do not think that their powers, as such, are lessened and I think that is why, for example, one can treat them, or at least one can talk with them, on a rational basis; that is why they are proper subjects for psychoanalytic procedures, whereas the psychotics, who have dam-

aged, lessened powers of one kind or another (and we have to analyze what they are in the individual case and study them), cannot respond in a normal kind of way to the analytic situation.

Dr. Donald Gregg (Wellesley, Mass.).—I want to thank those who spoke so kindly of my paper. I did not mean to bring any note of pessimism into the subject of deletion. I did speak in the paper of the importance of distinguishing between the deletion, or destruction, which is permanent and that which is a temporary affair and due to temporary noxious agents.

In my own experience I hesitate very much to think in final terms of destruction about any brain substance or any brain functioning. I think we have to think, just as we do in the case of cerebral hemorrhage, that there are certain areas where there may be destruction but there are other areas where there may be edema and interference with function which may entirely clear up. And, even with the areas that have had destruction we have no reason for pessimism as to the ability of the brain to be reëducated and take on functions that have been destroyed.

That is the only addition I wish to make. I did not mean to be pessimistic in any way. Frankly, I am not of a pessimistic nature and I know Dr. Meyer does not think so.

AGE INCIDENCE OF PARESIS.

By MAGNUS C. PETERSEN, M. D., St. Peter, Minn.

With few exceptions, all patients committed as insane from 40 counties in southwestern and central Minnesota are admitted to the St. Peter State Hospital. The population of this area is 1,018,660.* St. Paul, with 271,606 inhabitants, is the only city in the territory with a population over 15,000.

During the four years from January 1, 1928, to December 31, 1931, inclusive, there were 2317 admissions to the hospital. 57 of these were transfers from other state hospitals and 70 were duplications due to readmissions within this period. 2190 patients were received directly. The spinal fluid of 2088, or 95.3 per cent of the latter, was examined and evidence of paresis was found in 179, or 8.2 per cent.

Usually serological examination of the blood as well as of the spinal fluid was made both in the hospital laboratory and in the laboratories of the Minnesota State Board of Health. If the reports were doubtful or those from the two laboratories differed, repeated examinations were made. A diagnosis of paresis was not made unless it was substantiated by definite spinal fluid findings.

The youngest patient in the paretic group was a female 22 years of age, and the oldest a male aged 77. Paresis was found more frequently among the male than among the female patients, except in the third decade when the ratio was almost reversed. The incidence curve of the male is sharper than that of the female and reaches its peak a decade later. Paresis of the aged, presumed by authors of most text books to be rare, was not infrequent in this series.

The Wassermann reaction of the blood was negative in 18.5 per cent of the paretic group as a whole, and in 30 per cent of those 65 years of age and over. This undoubtedly explains why paresis of the aged often is diagnosed arteriosclerotic or senile psychosis.

* Fifteenth Census of the United States, 1930.

Spinal fluid examination, which affords the only means of differentiation, is generally neglected in the absence of serological changes of the blood.

TABLE I.

AGE DISTRIBUTION OF PARESIS AND RELATIVE FREQUENCY IN THE CORRESPONDING AGE GROUP.

	Number admitted			Incidence per 100,000 population		
Age (years)	Male	Female	Total	Male	Female	Total
20-24	1	2	3	2.2	4.8	3.6
25-29	3	5	8	7.7	13.0	10.2
30-34	12	5	17	31.6	13.5	21.8
35-44	35	18	53	47.2	26.5	37.0
45-54	51	13	64	92.7	26.0	60.0
55-64	16	8	24	40.0	20.3	32.0
65-74	6	3	9	23.0	13.6	18.7
75 and over	1	0	1	10.0	0	5.0

THE POTENTIALITY FOR CHANGE IN PERSONALITY.

By EUGEN KAHN, M. D., and LOUIS H. COHEN, M. D.,
Yale University.

The heredity-environment controversy has raged in psychiatry for many years. One may sometimes be of the opinion that it has not offered a really fruitful lead for practical therapeutic purposes. For, unfortunately, the inextricability of inherited and acquired factors in the personality appears to be so great that the psychiatrist who is interested in modification of adjustment may doubt whether there is any hope in a renewed attack on the problem. To dismiss the problem as futile would not be fair to the practical importance of the situation, however complicated it may be. We intend, therefore, to discuss the heredity-environment controversy under the special aspect of modifiability of personality.

Let us consider for a moment two extreme representative types in psychiatry. On the one hand, there is the orthodox clinician, reared in and devoted to the school of classificatory diagnosis, for whom the fate of every case is settled deterministically; and, on the other hand, the over-ardent psychotherapist for whom, at least in imagination, scarcely anything seems impossible in his endeavor to change the personality. One may say that the former represents the fatalistic genetic standpoint, whereas the latter represents the optimistic environmental standpoint. Most of us fall within that wide middle range of psychiatrists who feel that one cannot safely neglect either the genetic or the environmental factors even though no evaluation of these factors has found general agreement. Our purpose is to suggest a common ground upon which mutual understanding may be made possible in the application of our observations to the problem of personality change.

In every therapeutic situation it is the psychiatrist's primary aim to steer his patient toward a more adequate adjustment to a particular environmental situation. This aim is framed, usually, in accordance with what the therapist considers is the most adequate adjustment. If it be granted that the therapist is able to visualize infallibly this goal—an assumption which one certainly

may often question—there are at the outset, certain factors of which he must take cognizance in order to determine this goal and the feasibility of its attainment by his particular patient. The critical therapist recognizes that he must estimate these factors as quickly as possible. For this reason he obtains a careful history of the patient's family, which usually comprehends the patient's "heredity," and a history of the patient's life and "personality" before the onset of the "present illness." The patient is then considered in the light of his "endowment." From these data the therapist tries to estimate the capacity which he thinks the patient has for reaching the goal which may be set for him. At this very point, attention is to be directed to factors which, in our opinion, are too often under-evaluated, not only at the outset, but also during the course of the psychotherapeutic situation. For, as time and treatment go on, the type and wealth of historical material given by the patient and accepted by the therapist, are interpreted as indicating that the patient's capacity for attaining the set goal may be greater or less than the physician had originally recognized or assumed. We do not intend to quarrel with this since we recognize the inadequacy of first impressions and judgments. Our contention is, however, that with this unveiling of new material the therapist's attitude toward the patient may be changed more than is justified and desirable, and that eventually, such changing impressions of capacity for modification may again and again disturb the clear relationship between patient and physician.

The psychotherapist who is inclined to under-estimate the importance of inherited factors, and who therefore approaches his patient with the greatest hope, is under the temptation to force himself and the patient to certain goals which may be in full accord with the wishes of the psychotherapist but not with the capabilities of the patient. If, in the course of treatment, he is periodically confronted with the necessity of disentangling inherited and acquired factors he will probably be inclined to emphasize and even over-emphasize the acquired ones. As a result of this he may throw so much haze about the patient's total personality that serious doubt as to the presence of any significant hereditary factors arises in his mind with the consequent conviction that very extensive modification of the patient's personality can be successfully attempted. We wish to emphasize that at the outset, and at certain

intervals during the course of the patient's relationship with the therapist, the latter must "take inventory" of progress in the past, and must try to estimate the progress which he can expect in the future. For this purpose it is desirable to use a certain personality scheme which we shall discuss in its hereditary and environmental relationships.

The science of genetics has shown that there is nothing "preformed" in the hereditary factors, but that such factors must be considered as the elements with which the individual blends the multitude of fundamental possibilities from his ancestry. These possibilities are not unlimited either in number or in degree. They may be developed in the growing and maturing individual to a greater or less extent, but none of them, not even under the most favorable environmental circumstances, can ever develop or be developed beyond its limits. We name the genetic or inherited possibilities of the individual *potentialities,* and we imply in this term the definite meaning of limited possibilities. Let us take a physical example: there are genetic factors which somehow determine the individual's height; it is possible that a given individual may attain a height of six and one-half feet, but under certain circumstances he may grow to only six feet. However, his potential height remains six and one-half feet, and no environment whatsoever would allow him to grow seven feet tall, although acromegalic change, say, may produce approach to the six and one-half feet height. We think that in all potential factors the fundamental situation is the same. In other words: the environment is working upon the potentialities, and the potentialities are working in response to the environment, but neither of them can reach beyond its own limits—*nemo ultra posse obligatur.*

We may now apply these remarks to a rather generalized personality scheme which we think is elastic enough to be used for our present purpose. We look at the personality's make-up under the various aspects of the corporality, impulse-life, temperament, character, and intelligence. We maintain that these various aspects of the personality are rooted in the individual's hereditary endowment, in his genetic factors, or by reference to the foregoing remarks, in his potentialities. The example of height justifies the assumption that change of the patient's corporality is a factor over which the therapist, at least the psychotherapist, has little control.

At the other extreme, we have to deal with the patient's character, by which we mean the direction and focalization of the personality in various environmental situations, the purposive system of the personality. This lends itself to certain therapeutic modification. Since character is rooted in deeper layers of the personality these must be considered by the therapist. Character evolves from these deeper layers and their mutual relationships; it may, therefore, be limited in its development by the number and kind of potentialities upon which it is superposed. It is a therapeutic impossibility to attack these fundamental factors directly. It is character which offers itself as medium and mediator of the individual as a whole and the environment. It is character, therefore, toward which we must chiefly direct therapeutic endeavor which is always of the nature of environmental stimuli.

So we turn to the environment. We have often been told that environment is of utmost importance for the individual's behavior; behavior is the expression of the effect of the environment on the individual; therefore, it is necessary to change the environment only in order to change the individual. It is easy to prove this syllogism fallacious. Even if environmental factors, as is indeed often enough the case, change the individual's behavior, it is illogical to conclude that therewith the individual is changed. What one calls behavior is only an indicator, and often not a reliable one, of the individual's reaction toward a given environment at a given moment, but is by no means the individual himself. However, as a part of the individual's reactions, at least as that part of his reactions which we are able to observe immediately, we may evaluate behavior. In this evaluation we consider that environmental factors are stimuli which strike the individual in some way, and to which the individual shows, as we have mentioned, certain reactions. These reactions, however, disclose potentialities which are not *produced* by the environment but which have already *existed* in the individual. Environmental stimuli only meet or mobilize certain potentialities of the individual. It cannot be denied that different environments (various environmental stimuli) will give opportunity to various potentialities of the individual to become explicit. Furthermore, it cannot be denied that there are environmental conditions which may be favorable or unfavorable for the unfolding of certain potentialities of the individual. It follows then that since we may, to a

certain degree, exercise some command over environmental opportunities, we may make it possible for the individual to utilize potentialities to a greater or lesser extent.

Our heuristic hypothesis is that there is some sort of *constitutional changeability* in every person; that is, an *Anlage*-conditioned special factor of *potentiality for change*. To develop fully means to exploit this factor as much and as well as circumstances permit. One may consider this factor of constitutional changeability to play an outstanding rôle in what one may call the equation of the personality. The psychotherapist must critically estimate his patient's potentiality for change. We are as yet unable to give either a mathematical formula for an equation of the personality, or any mathematical statement concerning momenta of the personality's constitutional changeability.

We suppose that if the concept of this constitutional factor, the individual's potentiality for change, be kept in mind, many undesirable effects may be avoided. We think especially of the disappointments which the psychotherapist, as well as the patient, so often experience if, in the course of treatment, neither is able to realize original expectations. This may be often due to the fact that the earlier experiences of the individual are misjudged and misinterpreted by virtue of an overemphasized environmental point of view. However, all experiences, early and late, are met by the individual's potentialities, and whether or not an early experience plays a significant rôle in the individual's later life does not depend so much on environmental conditions as on developmental ones, *i. e.*, on potentialities and thereby on the individual's constitutional changeability.

From our discussion someone may question whether we are leaning too greatly toward the constitutional, and because of this, toward a pessimistic attitude concerning psychotherapy. We do not believe that this conclusion would be justified. On the contrary, we hope that our attitude toward the problem offers promise for advance in the solution of some psychotherapeutic difficulties. Our assumption is that there always is change and development in the personality which one can neither stop nor advance fundamentally with environmental procedure, that is, alteration of behavior alone. We feel that one must investigate the individual's potentialities, especially his potentiality for change. With this as a basis one must

decide whether and to what extent the individual may profit by changed environmental conditions which would serve as better and more promising opportunities to his potentialities, within their unconquerable limitations. We again call attention to the statement that a mere change of behavior never means a real change of the personality, but this is not at all nihilistic since we assume that with a well understood exploitation of the relationship between the individual's constitution and his environment, one may be able to realize the developmental capacities of many individuals. How far one may really influence the personality beyond mere behavior change with this procedure is still a moot question, but we would not hesitate to say that under favorable circumstances and with fair evaluation of all given constitutional potentialities and environmental possibilities, therapeutic modification of the personality's integration may sometimes be quite extensive.

It appears to be a fundamental biological law that the less differentiated the structure or function under consideration, the greater is its potentiality for change. One may adduce numerous examples of this in the biological realm, in contrasting the relative difficulty of embryological and adult modifiability, be it structural or functional. We advance the thesis that from a psychological and psychopathological standpoint a similar condition obtains.

We have previously indicated that character is a superstructure on foundations of corporality, impulse-life, temperament, and intellect. We have also mentioned that character is modifiable, but caution as to the limitations of its modifiability has also been sounded. The *raison d'être* of these limitations may now become more clear by a consideration of the hypothesis of the complexity-changeability ratio. If character changes, it does so because of change in one or several of its components or their relationships. The more simple these variables, the more easily modifiable; with increasing complexity, however, they become less and less modifiable. This concept may help us to understand the greater modifiability of the child as contrasted with that of the adult in whom the personality structure is more complex. It would follow then that there is a relative decrease of potentiality for change with the progress of developmental complexity. All potentialities are changing and some of them, sooner or later, may become exhausted. The speed of change is a variable as is its degree. Moreover, the very

fact of maturation and involution manifests changes of potentiality in overt physiological processes. The significance of environmental factors in these changes is secondary, if not doubtful; in our opinion such phenomena argue for the constitutional nature of the potentiality for change.

The potentiality for change exists in the monocell and necessarily plays an extremely important rôle in the evolution of more complex cellular structures. One cannot escape the impression that the drama of social development may contain the potentiality for change as a protagonist. We recognize that it is a far cry from the unicellular organism to the social or racial group. If it is true, however, that potentiality for change ultimately determines the extent and adequacy of social adjustment, simple or complex, it may perhaps be usefully applied for theoretical as well as practical purposes.

DIATHERMY IN TREATMENT OF GENERAL PARESIS.*

By HUGH A. McKAY, M. B.,
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AND
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The treatment of general paresis by artificial fever has effected favorable results in the hands of many observers. The bibliography on this subject has swelled to considerable proportions, and the conclusions drawn have been uniformly favorable. Until 1930, writers have reported malaria almost exclusively as the therapeutic agent. During the years 1930 and 1931 an increasing number of investigators have been contributing results obtained by the use of high frequency currents, a method first reported by Neymann and Osborne in 1929.

The elevation of temperature produced by a diathermy machine is more accessible to control than the malarial procedure, hence it is a preferable technique, provided that malaria does not possess curative properties other than its thermogenic one. This question appears to be answered. King and Cocke state, " There is every evidence that the benefits derived in the past from fever therapy by malaria and other substances have been due entirely to the accompanying elevation of temperature and not to any associated biochemical reaction to the infecting organism." Or, in the words of Schamberg, " These results persuade me to believe that the temperature is the dominant or perhaps the sole factor in the fever treatment of syphilis."

The merits of diathermy will be tested when a large number of cases have been treated in several clinics. It is with this in mind that we add this group of cases to the relatively few on record at the present time.

* Read by title at the eighty-eighth annual meeting of The American Psychiatric Association, Philadelphia, Pennsylvania, May 30-June 3, 1932.

Procedure.—Before treatment is commenced, each patient is subjected to a complete physical examination and detailed history, with urinalysis, blood examination, blood Wassermann and Kahn, spinal fluid Wassermann and Kahn tests, cell count, globulin test, colloidal gold and colloidal mastic. The patient is immediately placed on a course of novarsan and bismuth. Each patient receives a course of intravenous novarsan, consisting of 12 treatments at weekly intervals, the dosage ranging from .45 gm. at the beginning, to .75 gm. at the end of the course. Along with each novarsan treatment they receive intramuscular bismuth in doses varying from 2 to 4 gm. Coincidently, they receive the course of diathermy consisting of 40 treatments given on alternate days. At the conclusion of this course in diathermy, the serology is checked. The course of chemotherapy is repeated after a rest period of six weeks.

The diathermy machine used in this hospital is a Victor superpower diathermy apparatus having a capacity of 10,000 milliamperes. The electrodes used are of sheet tin and are fenestrated. The procedure follows that outlined by Neymann and Osborne. The usual current is between 4000 and 6000 milliamperes. The patient is placed in bed and the electrodes applied and held in place and the current is gradually stepped up to the necessary level (4 to 6 amperes); this takes about one-half hour. The temperature, pulse and respiration are charted every 15 minutes until the temperature reaches 104 at which time they are taken every five minutes. All temperatures are taken per rectum. The temperature rises slowly reaching 104 in about three hours at which time the current is shut off. The temperature then rises fairly rapidly about one degree before gradually beginning a downward course. The temperature is usually normal about seven hours from the beginning of treatment. Dehydration usually causes a loss of two to five pounds in weight. Thirst is counteracted by administration of fluids by mouth. Patients usually become restless, flushed and perspire freely. Sedatives are unnecessary.

The series presented in this paper comprises a total of 32 patients. Of this number, 28 have completed their course of treatment and it is with this group that we are chiefly concerned.

The results obtained in the group of 28 might be summarized as follows:

Three, or approximately 11 per cent, represent complete remissions; they are able to resume their former occupation outside the hospital.

Eight, or approximately 29 per cent, represent almost a complete remission; they have no physical defect, and no psychotic traits, nor outstanding mental defect; they are able to carry on trustworthy positions in hospital.

Seven, or 25 per cent, represent partial remission; they are able to carry on outside work in hospital under supervision. Three have physical defect and this limits their activity, one has a memory defect and one has considerable impairment of speech.

Seven, or 25 per cent, are unimproved, but are quieter, cleaner, cleaner in their habits and less trouble from a nursing standpoint.

Of the 28 treated cases, three have died. One death was due to an intercurrent erysipelas with pneumonia; he would have been classed as a remission. One death was attributed to a failure of heat regulation induced by diathermy and is discussed in detail below. One death was due to hæmiplegia.

All patients receiving the treatment have shown a marked physical improvement such as gain in weight and strength.

All patients in this series showed before treatment a positive blood Wassermann, a positive spinal fluid Wassermann and a typical colloidal gold and colloidal mastic reaction. On repeating these tests after a course of treatment there was found to be a change in the spinal fluid of nine patients. In six of these the colloidal gold and colloidal mastic reactions became normal but at the same time their Wassermann reaction remained unchanged. In one case the blood Wassermann was negative and the spinal fluid Wassermann positive, with a normal colloidal gold reaction. The three remaining cases showed a favorable change in both the colloidal gold reaction and the colloidal mastic. Three of the cases with normal colloidal gold reactions were clinical remissions. In the other six cases the improvement in the serology did not parallel the clinical course.

It is to be noted that seven of the series of 28 had received malarial treatment previously without result. The malarial treatment was administered not more recently than two years.

The following nine cases picked from the series illustrate the results achieved with this type of treatment:

CASE (A).—Admitted to hospital February 5, 1930. Blood Wassermann positive; spinal fluid Wassermann positive. Diagnosis—general paresis. On admission he was excited, agitated and non-communicative. After receiving his course of treatment, he recovered completely from his mental disability and was able to leave the hospital on May 15, 1931. Since that time he has worked steadily at his former occupation as a telegrapher with no return of any mental symptoms. At the time of his discharge his serology remained unchanged.

CASE (B).—Admitted to hospital June 30, 1931. Blood Wassermann positive, spinal fluid Wassermann positive. Diagnosis—general paresis. On admission he was irritable, violent, filthy in habits, and suffering from delusions of grandeur. He also had some speech impairment and was in poor physical condition. After receiving his course of treatment, he improved to such an extent as to be discharged from hospital on January 16, 1932. He had become quiet, agreeable, clean in habits and his delusions had disappeared. He gained weight and improved in general physical health. Since leaving hospital he has worked steadily as a decorator and is supporting his wife and family. His serology on discharge was unchanged.

CASE (C).—Admitted to hospital December 18, 1929. Blood Wassermann positive; spinal fluid Wassermann positive. Diagnosis—general paresis. On admission this patient was irritable and confused and suffering from hallucinations and delusions of persecution. He received the course of treatment and his mental symptoms have disappeared. He is now a trusted patient in the hospital and works daily in the greenhouse. His serology has improved markedly, his blood Wassermann is now negative and although his spinal fluid Wassermann is still slightly positive, his colloidal gold reaction is negative.

CASE (D).—Admitted to hospital July 11, 1930. Blood Wassermann positive; spinal fluid Wassermann positive. Diagnosis—general paresis. On admission he was mildly elated, euphoric, would not work, and was disinterested in his wife and family. He suffered from a marked memory defect. After receiving his course of treatment his memory was markedly improved. He is normally interested in his family and is a trusted worker about the hospital. Serology is unchanged.

CASE (E).—Admitted to hospital April 28, 1930. Blood Wassermann positive; spinal fluid Wassermann positive. Diagnosis—general paresis. On admission he was irritable, quarrelsome, and inclined to be violent. He also had delusions of persecution. He received a course of treatment and is now quiet and agreeable and is a good worker under supervision. His colloidal gold curve shows improvement.

CASE (F).—Admitted to hospital September 15, 1931. Blood Wassermann positive; spinal fluid Wassermann positive. Diagnosis—general paresis. On admission he was confused, excited, violent and at times unmanageable. After receiving his course of treatment he became quiet, communicative and agreeable. He gained weight and improved physically. He is now a good worker in the hospital under supervision. Serology is not markedly changed.

CASE (G).—Admitted to hospital July 22, 1931. Blood Wassermann positive, spinal fluid Wassermann positive. Diagnosis—general paresis. On admission patient was in poor physical health. Mentally he was excited, confused, and suffering from delusions of grandeur. He received a course of treatment and, although there has been little change in his mental condition, he has shown a marked improvement physically, and is now able to be up and dressed. He is tidy and clean whereas on admission he was unkempt and inclined to be dirty in habits. His serology has not changed.

CASE (H).—Admitted September 3, 1931. Blood Wassermann positive; spinal fluid Wassermann positive. Diagnosis—general paresis. This man on admission was in poor physical health. Mentally he was suffering from delusions of grandeur, and was in a euphoric state. He had a marked memory defect. Since completing his course of treatment, he has shown a marked improvement in physical health. Mentally, there has been little change but he is now up and dressed and assists in light work about the ward. Serology is unchanged.

CASE (I).—Admitted May 11, 1927. Blood Wassermann positive; spinal fluid Wassermann positive. Diagnosis—general paresis. On admission he was hallucinated and suffering from delusions of grandeur. He was noisy and destructive and unclean in his habits. After receiving his course of treatment he showed an improvement in physical health. Mentally, he became quiet, agreeable and clean in his habits. He is still delusional but is able to do simple tasks about the ward. His serology is unchanged.

The first three of these nine cases show a total remission.

The next three show practically a complete remission but are still in the hospital.

The last three patients, while showing very little mental change, have improved physically and in their habits so that they are now more easily nursed and cared for.

CASE HISTORY AND AUTOPSY REPORT OF A MAN WHO DIED IN THE COURSE OF TREATMENT.

The literature at present does not record any cases of death occurring under such circumstances that death might have been attributed to the therapy. The following case is that of a patient

who developed hyperpyrexia while on the machine, followed shortly by death. An autopsy was performed.

With the opportunity to study a case of this type at autopsy, two major questions were of interest. Was the patient suffering from disease which of itself caused death, or which might have rendered him more susceptible to the effects of diathermy? Secondly, what pathological effects of the treatment are revealed?

Clinical History.—Name: Urho Nissenen, Finnish man, aged 50 years. The patient was admitted to this hospital on August 16, 1931. He did not speak any English and it was difficult to get much information from him through an interpreter as he seemed to have considerable impediment in his speech. There was no history available regarding his infection.

On September 4, he was put on a course of novarsan (intravenous) and bismuth (intramuscular).

Blood Wassermann, August 21, 1931, "very strongly positive."

Blood Kahn test, August 21, 1931, "very strongly positive."

There was no anæmia or leucocytosis.

The urine was negative.

Spinal fluid.—180 cells per cubic mm. globulin was markedly increased. The spinal fluid Wassermann, August 28, 1931, "very strongly positive." Spinal fluid Kahn test.—August 28, 1931, "very strongly positive." The colloidal reaction gives a reading of 5555543210. Colloidal mastic 5542210000.

The only positive findings on the physical examination were: absent quadriceps reflex; achilles reflex absent; exaggerated biceps and triceps reflexes; Argyll Robertson pupil.

He was given a course of about 24 treatments by diathermy with an elevation of temperature up to 105 degrees for periods of two to four hours. On the day of his death, December 17, 1931, he was just concluding one of his diathermy treatments when he was convulsed by an epileptiform seizure. His temperature rose to 109 degrees at once and in spite of active treatment remained at this level for about fifteen minutes. He survived for four hours during which his temperature fell to 105 degrees and he continued to have epileptiform seizures. (He had had no seizures previous to this time.) He was unconscious from the time of his first seizure until his death. His respiration was about 60, his pulse was rapid and almost impalpable.

Autopsy Report.—(Date of autopsy 17/12/31). Date of death 17/12/31. Doctor J. A. Hannah, pathologist, performed the autopsy.

Body.—The body is that of a well-nourished adult white male. There is a considerable amount of post mortem staining of the dependent parts. Post mortem rigidity is marked. There is a recent burn just below the umbilicus about 3 cm. in diameter. External genitalia appear normal. Most of the teeth are missing. On opening the abdomen, the stomach seems to be distended with gas. The abdominal wall contains about 2 cm. of fat.

Left Thoracic Cavity.—The left thoracic cavity has a fibrous tag about the fifth rib and nipple line. The sac is free of adhesions and contains a small amount of clear fluid.

The Right Lung is bound with a few tags to the diaphragm next to the vertebræ.

The Heart is very soft and flabby and particularly the right side. The tip is composed mostly of left ventricle. There is the usual amount of epicardial fat. The heart weighs 330 grams.

The Right Auricle is free of blood clot. The tricuspid valve measures 12 cm. The pulmonary valve measures 9.5 cm. The pulmonary valve cusps are not thickened. There is a nodular thickening along the free margin along the tricuspid valve curtains. The foramen ovale is closed. The left auricle contains no blood clot.

The circumference of the mitral valve is decreased, measuring 8 cm. The mitral valve curtain is thickened and contracted and contains many hard nodules along its free margin. The chorda tendinæ are shortened. The papillary muscles are small. The aortic valve measures 8 cm. The valve cusps are thickened and contain several nodules on their free margin.

Just beyond the aortic valve, the aorta shows several small calcified plaques.

The Right Ventricle is thin walled. The muscle is reddish brown and has a glazed appearance. The muscle of the left ventricle measures 1.25 cm. in thickness. The orifices of the coronary arteries are patent. The coronary arteries contain some thickening along their walls.

The Right Lung weighs 450 grams. The lung is deeply congested and mottled with greyish-black pigment. The cut surface shows evidence of a recent hemorrhagic process especially in the lower lobe. On pressure, the cut surface exudes a pink frothy material. The mucous membranes of the bronchi are congested.

The Left Lung weighs 480 grams. It presents the same appearance as the right lung. On pressure the cut surface exuded large quantities of dark red fluid. The cut surface has a mottled appearance and throughout the lung there is evidence of a recent hemorrhagic process. The mucous membrane of the bronchi shows a moderate amount of congestion.

The Liver weighs 990 grams. It is of the usual shape. The gall bladder is normal in appearance, free from adhesions and contains about 10 c. c. of yellowish-green bile. There is no evidence of stones present. The surface of the liver is smooth and glistening and of a mottled appearance. It is soft and flabby to the feel and very friable. The cut surface is pale and the tissue has a glazed appearance.

Left Kidney weighs 105 grams. On palpation it is felt to contain a stone in its pelvis. The kidney is soft and flabby and the capsule strips readily, leaving a smooth and glistening surface. On opening the kidney, the cortex and medulla are seen to be well differentiated and the pelvis of the kidney contains a hard rough dark brown stone which practically fills the outlet of the pelvis.

Right Kidney weighs 105 grams. It is of the usual shape. There are several areas of white scar tissue on the posterior surface of the kidney and on this surface the capsule strips with difficulty, tearing the kidney tissue with it. The medulla and cortex appear normal. The whole organ is soft and flabby. The pelvis is free of stones.

Spleen weighs 90 grams. It is of the usual shape and has a mottled brownish-gray color. It cuts with considerable resistance to the knife. The cut surface shows an increase in the fibrous tissue and the pulp scrapes away readily with the knife.

The Thoracic Aorta is comparatively inelastic and its surface presents numerous hard raised plaques which are calcified.

The Suprarenal Gland is of normal size and on cutting presents the usual brownish and yellow color; the cortex and medulla being well marked.

The Mesentery of the small intestine is deeply congested. The mesenteric glands are not enlarged.

Th Stomach is greatly distended with gas. The small intestine does not look abnormal.

The Thyroid Gland is normal in outline and smaller than normal. It is soft and flabby and contains no areas of thickening.

The Prostate is about the size of a walnut. It is soft and flabby to feel and contains numerous areas of irregular thickening. The cut surface is very pale and appears to contain an increased amount of fibrous tissue.

The Brain.—The skull cap is very thick. There is an increased amount of cerebrospinal fluid. The arachnoid is dilated. The blood vessels over the surface are markedly engorged. The veins about the base of the brain appear to be perfectly normal. The meninges show some slight areas of thickening. The brain tissues are all very soft, edematous and glossy in appearance. The whole brain tissue shows a number of small pin point hemorrhagic areas. The blood vessels throughout are markedly injected. Just about the sylvian fissure there is a marked depression which corresponds with Broca's area.

Blocks of all the above tissues with the exception of the brain* were fixed in formalin, imbedded in parafin and sections stained with hematoxylin-eosin. The chief changes found on microscopic examination were hyperæmia and cloudy swelling. Almost all organs showed cellular necrosis, with pyknotic nucleus and poorly stained cytoplasm.

The gross and microscopic findings corresponded with the pathological changes which Jacobson and Nosoi described in animal tissues following heating by an ultrahigh frequency oscillator.

The data obtained both clinically and post mortem lead to the conclusion that the patient was not suffering from disease which of itself caused death. It seems likely that this individual repre-

* Through a regrettable accident in the laboratory the brain tissue was lost before microscopic examination could be made.

sents a type which is susceptible to the elevation of temperature induced by diathermy. There is apparently no method of recognizing such cases in advance. From the reported cases, the incidence of this susceptible group must be small. The post mortem changes exhibited by this patient are those which might readily be induced by hyperpyrexia alone.

SUMMARY.

A series of 32 patients treated by diathermy in conjunction with chemotherapy is presented. The clinical outcome of 28 completed cases is described.

The clinical course and post mortem findings of a case which died during treatment are outlined. Evidence that certain patients are susceptible to the elevation of temperature induced by diathermy is offered.

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PSYCHIATRY AND THE CRIMINAL.*

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Much has been written and much more spoken by many people in all walks of life regarding that phase of human conduct that we call crime. Civilization, as we call it, has been a process of evolution of society, and for many centuries it has been devising certain standards of conduct for its protection. These definable standards are what we now look upon as "law," and anyone who violates these standards of conduct we stamp as a "criminal." He is, therefore, an individual who performs certain acts which to him, in most cases, are inherently natural, but which society says must be suppressed.

Punishment.

Society has made laws primarily for the purpose of protecting itself and, until comparatively recent years, those in charge of the enforcement of the law have concerned themselves more with the act that is committed than with the law-breaker himself and the train of circumstances that caused him to commit the act. This has given rise to the various stereotyped forms of punishment meted out to the criminal. Punishment is presumably administered for one of three reasons—first, to protect society; secondly, to convince the prisoner of the error of his ways; and thirdly, as an object lesson to others and to discourage them from engaging in similar crime. Many years ago all humans were considered to be "very good" or "very bad." The good included the godly, the conventional, the harmless, and the inconsequential. The bad included the ungodly, the improper, the unconventional, and the anti-social. Of the bad, there were those who did things because of explainable and more or less rational impulses, and there were those who did things contrary to the usual and customary acts and thoughts of contemporaneous society. The conduct of this latter group was looked upon as mysterious in that it was unnatural, and

*The presidential address delivered at the annual meeting of the Philadelphia Psychiatric Society, Jan. 29, 1932.

they have gradually become classified as the "criminal-insane." The former group did anti-social acts that most men do or would like to do some time during their careers; they took revenge upon their enemies or they stole that which they coveted and could not honestly obtain. At face value, these individuals were but normal people yielding to a primitive impulse, but they were also stamped "criminals."

It is the opinion of nearly everyone concerned with penal affairs that confinement in prison does not tend to reform the criminal. At the end of his term the prisoner is likely to be more dangerous than he was at the beginning of it. The spectacle of punishment may deter some from committing crime, but that number is not great, otherwise crime would not be on the increase. Persons who are mentally and morally normal may turn from a career in crime by observing the effects of the administration of justice upon some of their confrères, but such a lesson has little effect upon the mentally impaired or the morally subnormal or unmoral individual. As long as the prisoner is actually within the confines of his jail, society is protected from him; but as soon as he is released at the expiration of his term, on parole or by pardon, society is again subject to his depredations. Because of this, the three reasons advanced for punishment of the criminal are not absolutely logical. What can be done, therefore, in discouraging the engagement of individuals in the so-called criminal pursuits?

Juvenile Initiation in Crime.

It is obvious that little can be done with the mature offender in "reforming him," but it is the consensus of opinion that most criminal careers begin in childhood or in adolescence and that then is the time to begin reformatory and prophylactic treatment.

The situation in the United States concerning the prevalence of crime is worse than anywhere else in the world. Murder in our great cities is 10 to 20 times more frequent than in European cities of similar size. We lead the civilized world in instances per 100,000 of population of crimes associated with violence such as highway robbery, arson, racketeering, kidnapping, organized bootlegging, and automobile theft. The typical old-time murderer was essentially what was called a "yegg," who murdered only because he was cornered or because he happened to be one of the "born

criminal" type. The modern murderer appears to come from a different mold. He is generally a youngster who begins his career in crime when he becomes able to play the vicious games of his street companions. In an effort to obtain that which he wishes, with no regard for the life or right of those about him, he learns to kill with the utmost *sang froid*.

As an instance of the graduation to adult crime of a boy springing from the slum districts and going through the gamut of juvenile crime, I will report the case of E. L. whom I examined at the County Prison in Philadelphia and who was later executed at the State Prison in Pennsylvania. He was one of eight boys, all born in an intensely congested district in Brooklyn, N. Y. His parents were Irish immigrants and he was of the first generation born in America. He went to the eighth grade in school and progressed normally, but he was always in conflict with the school authorities and was an almost constant truant. Despite this conflict he did not once fail at promotion. At 10 years of age he was arrested for petty larceny and was placed on probation by the Juvenile Court. He violated this probation and was then sent to the Catholic Protectory for ten months. Two months after his release from the protectory he was arrested for homicide and indicted for first degree murder, but the indictment was dismissed and he was committed to the House of Refuge for 15 months. Soon after his discharge from there he was arrested for complicity in a highway robbery in New York City. When 20 years of age he was accused of a felonious assault upon a detective, but he escaped punishment and went to Atlantic City, N. J., where he engaged in smuggling alcohol and in bootlegging, and he was arrested several times but each time escaped punishment. He never exhibited any regard for law or order or for the rights of property or of the individual. He was arrested in Philadelphia in 1927 because he had murdered his wife, the reason that he gave being that when he held the burning end of a cirgarette against her cheek she objected and struck at him and then left home. On examination this offender showed no evidence of any mental inferiority, but he was of the unrestrained emotional type and had absolutely no sense of right or wrong, and he was strictly unmoral in all his reactions. I would classify this youth as being of the "born-criminal" type, and he went the way of his protoplasmic urge. No amount of prophylactic psychiatric

work could have changed him, but it is obvious that in the congested environment of his tender years he was instrumental in initiating many others not so criminally endowed into the ways of crime.

The Menace of Urban Congestion.

To all students of criminology, and as has been frequently pointed out by Sheldon Glueck,[1] it is a well-known fact that most outlaw careers begin in childhood, and that the time to correct the criminal urge is in the tender, formative years, and it is also recognized that the breeding places for modern crime are in the squalid and congested districts of about a dozen of our metropolitan cities. Dr. Franklin Ebaugh,[2] of the Colorado Psychopathic Hospital, in an analysis of the juvenile crime situation in Denver, was impressed by the frequency with which the "juvenile offender" cases were found to be from the center-city area. The congestion in our so-called slum districts has become more intense with the rising price of housing accommodation. It is not an unusual thing in cities like Philadelphia to have families of six, eight or even twelve living in two or three rooms. In such quarters a child is raised with but little regard for what we call decency, and in addition he spends most of his pre-school time upon the streets. These gamins in their earliest play imitate highwaymen, the subjugation of the law, and the simpler arts of stealing. Anyone who has had the experience of having to park his automobile unattended in the intensely congested part of any large city has realized the danger of such a procedure because of the pilfering of any removable object that these youngsters can lay their hands upon. The congested areas of our great cities which we call slums are undoubtedly the breeding places for much of our juvenile crime and the training school for the later adult criminal.

In Germany and Austria no real slum areas are permitted, and there the police authorities have recognized these potential sources of danger and have endeavored to give livable tenements and play grounds in all districts that tend to become congested. As a result, the amount of crime in those countries is much smaller than in ours, and it has been reported by some investigators that there they "hold crime down to the born-criminal class." Large sums

of money have been spent on their boulevards and parks, but they also spend a great deal upon cleaning up and letting light into their slums.

The same ideas should prevail in city planning in America. It is as necessary and natural for a child to play as it is for any young animal. If he is given an opportunity for wholesome competitive play, as in a public park or play ground, he will have less tendency to develop those habits of contempt for the law which are derived from the vicious play in which many of our slum children indulge. The settlement house of the University of Pennsylvania, the Hull House in Chicago, and the numerous other special recreation centers that have sprung up in the congested districts of Philadelphia and other large cities through private enterprise have done much to further this saving of our youth. The New York Boys Club on Tompkins Square was placed in a particularly vicious district about 50 years ago, and it is now well known that no vicious gangs of boys congregate in its vicinity and that its contiguous crime rate is relatively low for New York. In the dispensaries of the Orthopædic and Children's Hospitals in Philadelphia numerous instances have been related by parents of the brutality of gangs of boys toward children who had previously been reared in a less congested environment, and who, by force of adversity to their parents, had been compelled to remove to the more squalid settlements. Just the other day a little boy was brought to the Children's Hospital Clinic by his mother with the statement that during the past year he had become very timid, that he would not go out and play with the other boys, that he would not go to school, that his sleep was disturbed at night by terrifying dreams, and that his entire personality had changed since the family's removal to a more congested neighborhood. Upon investigation by the social service department of the hospital it was discovered that because this little fellow had refused to steal fruit and candies from a neighborhood store at the command of a gang of boys dominating the district, he had been jumped upon and beaten every time he appeared on the street. It was only by the removal of this family from that district to an entirely different neighborhood that the little patient's timidity reaction was relieved. On the other hand, the action of doting mothers in not conforming the attire and actions of their offspring to the character of the

neighborhood and environment in which they live has been the cause of much suffering and peculiarities of behavior on the part of their offspring. One little fellow was brought to the clinic of the Orthopædic Hospital by his adoring mother with the statement that her son had developed a typical "shut-in" personality, but when he was observed to be dressed in a little blue velvet "Lord Fauntleroy" suit, and it was noted that he was living in the vicinity of Fourth and Tasker Streets, the reason for his reaction was quite obvious.

Reform Schools.

The boy who is a frequent truant from school in his childhood often develops into the adolescent gangster and criminal. The social service departments of our juvenile courts and hospitals give constant evidence supporting this statement. If the juvenile offender is captured early and sent to a "reform school," as is the case in many states, the result is usually the graduation of a real criminal, one who is a much more serious menace to society than before he was incarcerated. In the report of Dr. Glueck[1] concerning the 510 young men and boys who left the Massachusetts Reformatory during the years 1911-12, it was discovered by an intensive follow-up investigation that 80 per cent were not reformed 5 to 15 years later and that they had continued in their criminal careers. The report shows that this reformatory, probably one of the best in the world, failed in the very purpose for which it was constructed—that it did not reform and was in effect but a prison. In these institutions children and adolescents come in contact with others who have vices and criminal urges different from their own, and they are actually in a school for crime rather than in a school against crime.

Probation.

Dr. Richard Cabot[2] states that all forms of investigation, along with psychiatry and psychology, have given few if any clues of proven usefulness in the treatment of crime, especially as relates to the adult criminal. He believes that probation is not a pronounced success because of the inefficiency of most probation officers due to their lack of training and their poor pay. In many states the juvenile offender is sent to jail with the adult offender.

There he learns new vices and new tricks of the criminal trade. As a result, when he returns to his old environment where he is again subject to the same temptations and opportunities, he is a more proficient law-breaker than he was before his incarceration.

It is true that not every child that is reared in the slums of our great cities adopts a criminal career, but it is an undeniable fact that the great proportion of those who are hailed into our courts do come from these areas. Many of the children from these districts who grow up and adopt criminal careers have inherent nervous and psychopathic disturbances. About 20 per cent of them show a pronounced degree of mental inferiority and some few are essentially criminalistic in their protoplasmic make-up. About 50 per cent to 75 per cent of them are approximately normal as regards minds and bodies and nervous systems. It is among this large group that the potentialities for preventing the inception of a criminal career are very great through the medium of social service instruction and carefully supervised probation. To the mentally abnormal group the psychiatrist and the psychiatric clinic in connection with the court offer a means of treatment. Dr. Horace Pike[4] states that in his opinion 75 per cent of all crimes are committed by individuals who are abnormal mentally and he believes that the honest solution of the crime problem lies in the early recognition and proper handling of those individuals who, because of mental disorder or mental defect, are liable to become anti-social to the extent of perfoming criminal acts. He believes that most criminals are such because of a psychopathic inheritance or faulty environment in early training.

The Second Generation of Immigrants.

One is often struck by the preponderance of foreign names among our prison population, especially those of Russian-Jewish and Italian genesis. In a compilation of the family records of criminals with foreign names it is the usual thing to discover that it is not the original immigrant to America who comes in conflict with the law, but rather the first generation born in America of foreign born parentage. The sudden and unusual liberty which is generally in contrast to the restrictions imposed upon life in European environment is believed to be responsible in part for this dereliction on the part of the first generation of the native born

children. These children are generally raised in the congested areas of large cities where they have the benefit of no wise and trustful guidance in the choice between the best and the worst in American life. It is also observed that in the third generation this tendency to participate in crime is less obvious, possibly because of the fact that the intellectual normals of the group have been able to remove from the congested environment of the slums and those with criminal tendencies have been segregated from society or have been killed.

The Psychiatrist and the Court.

Dr. William Healy is generally credited with being the pioneer in bringing the psychiatrist into court work. He directed our attention to the great number of psychological and sociological problems occurring in the Chicago Juvenile Court. There he endeavored to transfer some attention from the act which the prisoner had committed to the personality make-up of the prisoner himself in relation to *why* he did the act. This in brief he interpreted as being the difference between the attitude of the lawyer and of the psychiatrist toward the same situation—namely, the criminal and his act.

What predisposed the prisoner to perform the anti-social act the psychiatrist is endeavoring to determine. Such factors as a physical or intellectual deficiency, emotional or psychopathic instability and irresistible impulses, have all been propounded as causes for abnormal conduct. These are but names and not explanations. Punishment, which is the most available and most frequently used tool of the courts and society against the criminal, is often to the psychiatrist the surest means of increasing crime. James E. Plant,[8] psychiatrist to the Essex County (New Jersey) Court, states that he visions the psychiatrist and the judge as two persons with markedly divergent interests representing different points of view, but both seeking a solution of the same problem. He states that the psychiatrist makes the work of the juvenile court judge much more arduous, and that the development of the psychiatric clinic will increase the difficulties of the court, but by the same token it will increase the efficiency of the court. He believes that the psychiatric clinic exists only to present its claims before the court and that the majority of the work should remain in legal hands.

It is obvious that the greatest hope for the future lies in prevention. The potential criminal and the delinquent child may be recognized in early life and more efficient means for their detection and facilities for special preventive education will succeed where the law has failed, for in many instances the problem of the criminal is essentially a scientific and not a legal one.

The Juvenile Court and the Clinic.

In many instances children who become criminals do so because of some apparently trifling factor which directs their urge toward criminality, and their unhealthy environment does the rest. It is by being able to come in contact with the early phases of the child's life and by endeavoring to change the environment in which this life is spent that we can hope to prevent the disease from becoming epidemic.

About 100 years ago in Great Britain it was not unusual to hang children of 10 or 12 years for minor offences. A little later reform and industrial schools were established, but as I have remarked elsewhere, these failed of their purpose. Emotionally unstable boys are especially influenced by immoral forces, and nearly every youth who is committed to an institution encounters hardened and ingrained criminals, and by this contact their schooling and graduation into the unreformable criminal class is brought about.

The next step forward was the separation of the juvenile court from the routine courts, and along with this came the institution of the probation system by which the judge and the probation officers endeavored to investigate the mind and personality of the culprit child, and gave him supervised liberty rather than throwing him into contact with hardened criminals in the reform schools. I believe that all of the States in the Union except two have juvenile courts and probation systems at this time. In dealing with the usual run of first-offence juvenile culprits the present idea is to keep these children from coming in actual contact with the court at all. Upon being arrested they are taken to the station house, turned over to a probation officer, and then taken to their homes; by this means avoiding the moral contagion that occurs from herding delinquent children into institutions with others of their kind. Juvenile offenders usually confess, and in a few days the juvenile court functions and endeavors to get to the bottom of it all.

Judge Paul Schaeffer of Reading, Pa., recently read an address on "Juvenile Delinquency" before the Philadelphia Psychiatric Society in which he related his personal experiences in dealing with juvenile culprits in Berks County away from the atmosphere of the court room and the jail. His results with young offenders have been amazingly good. There, by investigation through parents or guardian, neighbors, playmates, and the school, an effort is made to discover why the young culprit reacted in an anti-social manner. All of this contemporaneous information about the boy's environment is ready for the judge when he interviews the boy. In many of the juvenile courts of our larger cities the psychiatric clinic which functions along with it has examined the boy and has endeavored to find out the cause of the delinquency. He is examined by the doctor in charge in an effort to determine the extent of his fundamental intelligence through a sizing up of his general knowledge, supplemented frequently by psychometric tests. Those whose I. Q.'s are particularly low generally prove to be the most difficult cases to handle, as is likely to be the case with the low I. Q. in any walk of life. A considerable number of interviews between the psychiatrist and the patient are usually necessary before the actualities in the boy's situation are unraveled. He most frequently begins by lying, although in the end he generally tells the truth. The more modern science of psychoanalysis has offered through its disciples much help in the unraveling of some of these peculiar conduct patterns.

In the Boston Children's Court the majority of first offenders go on probation and are transplanted at the beginning of their treatment to another environment. These so-called potentially dangerous young citizens are generally placed with private families who undertake the task of reformation. The juvenile court social service department has a file of those families who will board children who are on probation. They are usually people from the humbler ranks of life, but it is an axiom that their homes must be far removed from the congested slum districts. Through these families the juvenile court is able to keep a more or less constant watch upon the conduct of their wards. Some of the children "skip" their parole, but the majority find more satisfaction in a normal law-abiding existence than they did with their previous career, and, as a result, they tend to grow up into normal law-

abiding adults. It is a proven fact that central Boston and its congested district has very little juvenile crime, and it is the boast of that city that the lawlessness associated with racketeering has never taken root in that part of Boston over which the Children's Court has jurisdiction. The results in cleaning up this district of Boston are particularly illuminating when viewed in the light of the activities of their juvenile court and psychiatric clinic, despite the fact that there are only one judge and four probation officers to carry it through.

All juvenile courts should have psychiatric clinics attached to them, together with an executive staff, social workers and probation officers. There have been rapid strides during the past 20 years in our knowledge and treatment of mental disease. The psychiatrist can identify these cases of inferior intelligence or emotional instability which tend to embroil their possessors into conflict with the law. He also is able to evaluate the histories of the more normal and determine the basis or the cause of their delinquency.

Suggestions for the Treatment of the Present Day Situation.

Dr. William A. White,[6] in an address before the American Bar Association, formulated some very constructive ideas concerning the relation of psychiatry, courts and crime. He minced no words in stating that he believes that the methods of legal procedure of the present day are based upon concepts which are largely obsolete, and that penal methods as they exist at present are quite inadequate to deal with human behavior; that the law emphasizes too greatly the act and too little the individual. The evolution of legal procedure has been based essentially upon precepts and many of the ideas incorporated in it are many centuries old. Dr. White considers modern psychiatry as a relatively new science, although mental disease and defect have been present longer than the law. He also considers that many of the concepts of law originated centuries ago in the desire for vengeance against the offender and that punishment which the law imposes is a response to this desire. Dr. White has issued a plea for union of effort betwen the psychiatrist and the lawyer instead of the present antagonism of

different ideas and concepts, and he formulates certain suggestions which I will quote:

(a) To do away with fixed prison sentences for certain types of crime and make the return of the prisoner to freedom conditional upon some change in him that warrants the assumption that he may function more effectively in the future than he did in the past.

(b) The elimination of punishment as a vengeance motive.

(c) The gradual transformation of prisons into laboratories for the study of the individual and of behavior instead of being depositories for those who have committed anti-social acts.

(d) The discarding of the concept of responsibility.

(e) The making of the positions of district attorneys and judges of the criminal court permanent, by appointment based upon competitive examination.

Dr. White's suggestions are ultra-radical, but at the same time he is to be commended for his temerity in talking so " straight from the shoulder " before the American Bar Association.

It is quite obvious that there is no specific formula which can be adopted that will make any sudden and appreciable difference in the incidence of crime. Experience has shown that about 20 per cent of all criminals are feeble-minded to a greater or less degree, and that about 10 per cent are of the " born-criminal " class. The remainder of the great army that come in conflict with the law are those who have done so through force of circumstance, especially as regards a vicious early environment. It is with this group that prophylactic treatment may be of value. Experience has proven that it is distinctly advisable to separate the juvenile court from the adult courts. Those courts that have had psychiatrists, psychiatric social workers and well trained probation officers as adjuncts have been able to achieve the best results, as is noted in the experience of the Boston court. By the same token, psychiatric and psychological examinations of all prisoners accused of felonies should be made before the prisoner has his trial so that the judge may have a knowledge concerning the personality of the criminal as an individual as well as an understanding of the act that he committed. The present system of prosecution and defense in criminal cases employing different groups of psychiatrists for the setting forth of their opinions has given rise to the so-called " battle of the experts " which has been condemned by all thinking men the world over and has given to the medical profession a de-

gree of opprobrium that it does not deserve. A great deal of this confusion that is brought into sensational cases could be averted if the mental status of the prisoner be determined by a group of psychiatrists appointed by the court and not by either the prosecution or the defense. The ability of the average jury to understand the intricacies and discussion of the psychiatric condition of a prisoner is limited, and because of this ineptitude of the jury they most frequently return a verdict at variance from the testimony and concepts that had been propounded by the psychiatrists.

Another suggestion that will encourage confidence on the part of judge and jury in the sincerity of the medico-legal expert is that those psychiatrists who sit at the counsel table of the prosecution and defense attorneys be enjoined from giving testimony on the stand and, by the same token, that those who give expert testimony do not actively assist at the counsel table.

There is need of more efficient psychiatric investigation of school children who exhibit evidence of mental defect (either quantitative or qualitative) and of those who are persistent truants, who exhibit conduct disorders, or are in early conflict with the law. The activities of our child-guidance clinics have aided much in establishing the value of the psychiatric clinic as a prophylactic medium.

Another point that has been proven is the need for further increase of play ground facilities and breathing spaces in the more congested districts of our great cities. As I have stated, the experience of Europe in this regard has proven the value of this procedure.

The great profession of the law is a noble one, but it has not changed in its precepts or ideas in some instances for many generations. The same situation may be said to have existed as regards the science of psychiatry for many years, but within the past 20 years there has been a great change in the attitude of medicine toward its growing relative—psychiatry. It is the hope of the medical profession that by a union with the legal profession and a more harmonius cooperation between the two, much may be done in diminishing the incidence of crime, and that a better understanding of the psychology of the prisoner as a person will be established.

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MEASUREMENT OF MENTAL DETERIORATION IN DEMENTIA PRÆCOX.

By RUDOLPH SCHWARZ, M. D.,
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One of the outstanding symptoms in chronic dementia præcox is the mental deterioration. To evaluate this deterioration is one of the perplexing problems of psychiatry. Psychology has provided us with a number of mental tests mainly to examine native intelligence of the individual, while certain investigators, notably Yerkes,[1] Hart, Spearman,[2] and Pressey,[3] have focussed attention upon the mental abilities of the diseased mind.

Babcock[4] has advised a test which is based on the assumption that in mental deterioration the vocabulary of the individual is affected least of all. She uses a series of standardized tests and determines the mental age with each individual test. The vocabulary test is then given. The mental ages of the non-vocabulary tests are added together and the average mental age found. This mental age is compared with the age found by the vocabulary test. The average age found by the non-vocabulary tests is now subtracted from the age found by the vocabulary test. We obtain a number which is called the inefficiency index. In normal persons this index approximates 0, plus or minus. In deteriorated persons this index is mostly minus. If, for example, in a normal person the vocabulary test gives an I. Q. of 14 years and the non-vocabulary tests give an I. Q. of 14 years, the efficiency index is 0; if the vocabulary test gives an I. Q. of 14 years and the non-vocabulary tests give an I. Q. of 16 years, the efficiency index is plus 2; if the vocabulary test gives an I. Q. of 14 years and the non-vocabulary tests an I. Q. of 12 years, the efficiency index is minus 2 and is called inefficiency index.

In deteriorated patients an inefficiency index is usually found. 110 patients, suffering from dementia præcox were examined with this test in the Dannemora State Hospital. Only six showed a positive efficiency index. These patients are well oriented, willing to answer, but delusional. W. C. thinks that the Rockefellers are after him, this being the only delusion he expresses; A. M. speaks in a rational manner but believes that the doctors are against him; I. F. says that poison, injected into his arm 13 years ago, is circu-

lating in his veins. These patients have a plus efficiency index and might, by a layman, be considered normal as long as they do not express their delusions. This would suggest that in cases where there is not a tangible deterioration the efficiency index may not be negative.

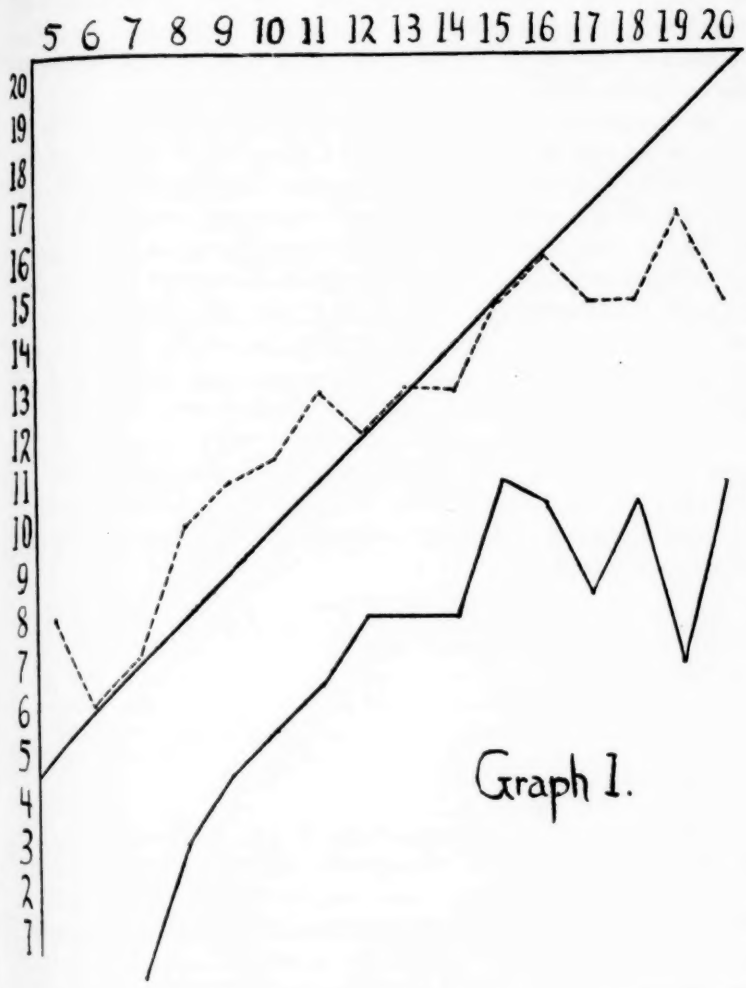
Let us now consider the negative or inefficiency index. In our series there are cases of a minus 7 or minus 8 efficiency. We take the cases of the most pronounced inefficiency index: J. A. has an inefficiency index of −8.3, he is incoherent in his speech, disoriented as to time and place, smiles foolishly, is delusional and idle; E. L. has an inefficiency index of −7.1, he talks in a confused and rambling manner, shows perseveration, is disoriented, delusional and idle; W. T. has an inefficiency index of − 7, speaks in a disconnected manner, is preoccupied, unaware of his surroundings and does not talk to any of his fellow patients; S. C. has an inefficiency of −6.9, his delusions are poorly systematized, he believes that he is Napoleon, speaks in a rambling and disconnected manner and is unable to direct his attention; E. B. has an inefficiency index of −6.9, his elaborations are disconnected and illogical; W. S. has an inefficiency index of −6.5, speaks in a rambling manner, his delusions are absurd; J. B. has an inefficiency index of −6.4, he is preoccupied, hallucinatory, his answers are irrelevant and he is disoriented as to place. There seems to be a definite relationship between the inefficiency index and the clinical symptoms of deterioration.

If we calculate the average efficiency index of the 110 cases we get the number −3.4; the corresponding efficiency index of 110 normal persons would be 0.

This test seems to have a theoretical justification. Language develops phylogenetically and ontogenetically first of the higher mental faculties. The first step forward in the development of mankind was the speaking and understanding of sounds and gradually of words and in the same manner verbal communication is the first acquisition of higher mental order in the baby.

Let us now compare the vocabulary test with the "memory of paragraph" test. Our 110 dementia præcox patients were grouped according to their mental age obtained by the vocabulary test. Six had a vocabulary age of 20 years, four of 19 years, seven of 18 years and so on down to the mental age of 7 years. Now those six patients who obtained a mental age of 20 years with the vocabulary

test were examined with the "memory of paragraph" test and it was found that they did not average more than 11 years; that means that these six patients are nine years lower when their "memory



Graph 1.

of paragraph" ability is compared with their vocabulary ability. The four patients with the vocabulary rating of 19 years were 12 years lower in their "memory of paragraph" test; the seven patients with the vocabulary rating of 18 years were $7\frac{1}{2}$ years lower. After obtaining these data Graph 1 was constructed.

The straight line represents the vocabulary rating; the broken line is the response of normal persons in the "memory of paragraph" test, the unbroken line is the response of the 110 patients in the "memory of paragraph" test. We see that the normal response keeps pace with the vocabulary line but that the pathological response is far below the normal response and far below the vocabulary line.

Let us add now all the mental ages of the 110 patients which are obtained by the vocabulary test and all the mental ages which are obtained by the "memory of paragraph" test; we find then that the sum of the mental ages of the vocabulary test is definitely higher than the other; and it is only a simple calculation to express this inferiority shown on the "memory of paragraph" test in percentages of the value of the vocabulary test. We obtain a percentage of 53.4 per cent. This means that the ability of these 110 patients to pass the "memory of paragraph" test is only 53.4 per cent of their ability to undergo the vocabulary test.

The same procedure may be performed with every one of the non-vocabulary tests. A graph can be constructed showing the inferior response in comparison with the normal response when the vocabulary age is taken as a measure. I will cite the percentages of a few tests:

	Per cent
Vocabulary	100.0
School knowledge	86.0
Opposites	80.9
Naming the days	79.1
General information	74.5
Word recognition	70.2
Repetition of digits	69.0
Counting from 20-1	65.6
Saying of alphabet	65.5
Retention of paragraph	56.2
Memory of paragraph	54.3

The *vocabulary* ability is taken as 100 per cent. The next on the list is *school knowledge;* instruction in school is usually received long before the pathological process of dementia præcox starts. Then follows *naming of opposites;* this test is founded on the language ability of the individual and this seems to be another favorable fact for the main assumption of the Babcock test, namely that the vocabulary of the patient is the least attacked in the de-

teriorating process. At the bottom of the list are *retention of a paragraph* and *memory of a paragraph*. In these two tests a paragraph is read to the patient and he has to direct attention, build new associations and innervate different correlation centers to bring into action reason and judgment in understanding and remembering the point of the story. This task is very difficult for the deteriorated patient.

We saw a relationship between the inefficiency index and the clinical symptoms of deterioration. If this is the case then the inefficiency index must become more pronounced as the disease progresses and the deterioration advances. By correlating the duration of the desease and the degree of the inefficiency index we are able to construct Graph 2.

On this graph we see an increase in the inefficiency index together with the longer duration of the disease.

In looking over the shortcomings of the test we have to state that a number of our patients could not be examined as English

was not their mother tongue. It may be argued that the vocabulary test does not set any time limit but most of the non-vocabulary tests are measured by time and this fact may explain the inferiority of the results with the non-vocabulary tests. But we see that the normal person in spite of the time measurement achieves a much higher standard in the non-vocabulary tests than the deteriorated patient when the vocabulary ability is used as a means of comparison.

SUMMARY.

The Babcock test is based on the assumption that the language ability of a deteriorating patient is the most resistive to the ravages of the disease, that the difference between the vocabulary and non-vocabulary tests indicates the degree of deterioration.

One hundred and ten dementia præcox patients showed a definite inferiority in their performance of a group of non-vocabulary tests compared with their ability shown in the vocabulary test. This inferiority may be expressed in percentages and was found to be 53.4 per cent in the performance of the "memory of paragraph" test.

It was noticed that with the longer duration of the disease and the deepening of the deteriorating process the size of the inefficiency index grew.

This test, when found to be scientifically sound, may be profitably used as an auxiliary criterion to differentiate amentia from dementia and benign mental processes from malign mental afflictions.

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Proceedings of Societies

THE AMERICAN PSYCHIATRIC ASSOCIATION.

PROCEEDINGS EIGHTY-EIGHTH ANNUAL MEETING.

PHILADELPHIA, PA., MAY 30–JUNE 3, 1932.

TUESDAY MORNING SESSION.

MAY 31, 1932.

The Eighty-Eighth Annual Meeting of the American Psychiatric Association convened in the Rose Garden of the Bellevue-Stratford Hotel, Philadelphia, Pa., at ten-five o'clock, the President, Dr. William L. Russell presiding.

PRESIDENT RUSSELL.—The meeting will please come to order.

The proceedings will be opened by an invocation by the Right Rev. Francis M. Taitt, Bishop of Philadelphia.

PRESIDENT RUSSELL.—The Committee on Arrangements has very kindly invited some of the distinguished citizens of Philadelphia to bid us welcome. I am going to call on the Chairman of the Committee to present these gentlemen to us. Dr. Buckley.

DR. ALBERT C. BUCKLEY (Philadelphia, Pa.).—First, it is my great privilege to introduce his Honor J. Hampton Moore the Mayor of the City of Philadelphia. Mayor Moore is greatly interested in the problems which we have at hand, and particularly in those confronting the City of Philadelphia.

The audience arose and applauded.

Mayor Moore gave the Association a hearty welcome, spoke of some of the administrative problems confronting the city, and expressed the wish that the Association might give some aid in their solution. His remarks were received with hearty applause.

DR. BUCKLEY.—The second speaker I have the pleasure to introduce is the Director of Public Health of the City of Philadelphia, Dr. J. Norman Henry.

Dr. Henry referred to the interest of the Department of Public Health in the mental health of the community and of the intimate

connection between general hygiene and mental hygiene. He referred to the new Philadelphia Hospital for Mental Disorders at Byberry and expressed regret that it was already crowded beyond its capacity, and was also handicapped by faults in planning and construction.

PRESIDENT RUSSELL.—We greatly appreciate the presence here of Bishop Taitt, his Honor, the Mayor, and Dr. Henry and we thank them very much for their kind words of welcome.

A meeting of the Association in Philadelphia has more than ordinary interest and significance for the Association because it was here that the Association was founded eighty-eight years ago, and it was here that the hospital treatment of mental disorders was first undertaken, a subject in which this Association has a very particular interest. It was here also that the first eminent psychiatrist of this country lived and practiced, Benjamin Rush, whose name and face grace the seal of the Association.

Philadelphia is a great medical center. It is a place of noted medical colleges, hospitals and institutions and a pleasant place to be, a city of homes, noted I believe for the number of individual, separate homes. We are very glad to be here and we thank you very much for your kind welcome.

I will now call upon Dr. Buckley, the Chairman of the Committee on Arrangements to make a statement.

Several announcements were made by Dr. Buckley.

PRESIDENT RUSSELL: Committee on Program. The Chairman is Dr. Hamilton who will make a report to the Association.

DR. SAMUEL W. HAMILTON (White Plains, N. Y.).—Mr. President, the program as printed will, for the most part, be presented. We know, however, that two of our readers are ill and there may be other omissions. You have noticed that there is a supplementary list of readers, so that there will be no lack of interesting papers and discussions and from time to time we will inform you of changes in the program.

May I speak of the exhibit? Members of the Construction Division of the Veterans Bureau at their own expense have prepared not a comprehensive exhibit of what the Veterans Bureau is doing but a sample of the various kinds of buildings that they have put up. That Construction Division has been accomplishing one of the most important hospital building programs in the country. We hoped also to have a considerable number of interesting hospital windows. Owing to financial difficulties, one important concern is not represented. We are indebted, however, to the Brown Richie concern for two of their windows.

PRESIDENT RUSSELL.—I will now call upon the Secretary-Treasurer to make the report of the Council.

SECRETARY CHENEY.—The Council met at the Bellevue-Stratford Hotel, Monday evening, May 30, 1932, eleven members and five past presidents being present.

The Council approved the applications of 12 physicians for fellowship, accepted last year, and recommends them for election this year.

The Council approved the applications of 36 physicians for fellowship, these to lie over until next year for final recommendation.

The Council approved the applications of 69 physicians for membership and recommends their election.

Unless there is some objection, I shall not read all of these names which are on the sheets that have been distributed and which will be presented in the form of a ballot tomorrow morning for action by the Association.

The Secretary presented the names of the following Fellows who have been active members or Fellows for thirty years, to become life members: Dr. Albert Edward Brownrigg, Dr. Arthur V. Goss, Dr. Edward E. Mayer, Dr. Emma Putnam, Dr. Mary M. Wolfe.

The Secretary presented the application for transfer to fellowship of 39 members who had been such for three or more years and are in good standing. The Council approved of these transfers.

The Council voted to accept the resignation of one member and six Fellows, all being in good standing. These are: Dr. Leon Izgur, Brooklyn, N. Y.; Dr. Harry S. Atkinson, Manitoba, Canada; Dr. Harvey Claire, Guelph, Ont., Canada; Dr. Marjorie Fulstow, Boston, Mass.; Dr. Charles E. Sandoz, Boston, Mass.; Dr. S. S. Stack, Milwaukee, Wis.; Dr. Louis A. Miller, Toledo, Ohio.

The Council voted to accept the application of W. Franklin Wood, of Boston, for reinstatement.

The Council voted to consider as dropped four members and fifteen fellows who remain three years in arrears in dues after three notices and a special letter have been sent to each one, provided they remain delinquent up to the end of this annual meeting.

The Council voted to recommend to the Association election as members of four physicians whose applications for membership were laid on the table last year.

Following is a complete list of names of applicants approved by the Membership Committee and the Council.

For Fellowship, approved last year for final election this year: Francis J. Gerty, Chicago, Ill.; Sarah Coppinger Johnson, Franconia, N. H.; C. P. Kjaerbye, Fresno, Calif.; Harry B. Levey, New Orleans, La.; Chester A. Marsh, Selinsgrove, Pa.; John D. Reichard, Ellis Island, N. Y.; Walter Schilling, San Francisco, Calif.; Rose D. Senior, Chicago, Ill.; Edward W. Twitchell, San Francisco, Calif.; Ira S. Wile, New York City; Orus R. Yoder, Ypsilanti, Mich.

For Fellowship, approved this year—to be submitted for final election next year: Charles R. F. Beall, Atlanta, Ga.; Eugene F. Bogen, Hines, Ill.; Hugh Thompson Carmichael, Albany, New York; John P. S. Cathcart, Ottawa, Ont., Canada.; Henry Octave Colomb, Pineville, La.; Robert E.

Gardner, Mentor, Ohio; Walter P. Gardner, St. Paul, Minn.; Joseph LeRoy Gilbert, Washington, D. C.; Ross E. Herold, Willard, New York; Edward D. Hoedemaker, Philadelphia, Pa.; Clark B. Holbrook, Waymarth, Pa.; Z. Rita Parker, New York City; Homer I. Rexford, Central Islip, L. I., N. Y.; Edward C. Ruge, Sedro Woolley, Wash.; Paul H. Rupp, Wauwatosa, Wisc.; Ernest F. Russell, New Haven, Conn.; William S. Sadler, Chicago, Ill.; William V. Silverberg, Baltimore, Maryland; George C. Stevens, Yellow Springs, Ohio; Charles W. Thierry, St. Louis, Mo.; David Bruce Williams, Evanston, Wyoming; George W. Wilson, Detroit, Michigan; A. L. Beier, Chippewa Falls, Wis.; Harry H. Botts, Washington, D. C.; Joel Milam Hill, White Plains, New York; Richard H. Hutchings, Jr., Wingdale, New York; Walter Raymond Krauss, Wernersville, Pa.; Ralph A. Noble, New York City; Maurice Levine, Baltimore, Maryland; George A. Rowland, Chillicothe, Ohio; Henry O. Witten, St. Louis, Mo.; Titus H. Harris, Galveston, Texas; P. G. Lasche, Palo Alto, Calif.; Gerald C. Parker, New York City; Samuel A. Silk, Washington, D. C.; William J. Donohue, Newark, N. J.

For Membership, approved by Membership Committee and Council: Truman J. Allen, Brandon, Vt.; Niels Landmark Anthonisen, Waverley, Mass.; Prince P. Barker, Tuskagee, Ala.; Constantine C. Barnett, Lakin, W. Va.; J. Fremont Bateman, Cincinnati, Ohio; Robert S. Bookhammer, Byberry, Philadelphia, Pa.; George C. Branche, Tuskagee, Ala.; Walter Bromberg, New York City; D. D. Chopman, Spencer, W. Va.; Eugene C. Ciccarelli, New York City; Mildred Warden Couch, New York City; John G. Cullins, North Chicago, Ill.; Henry A. Davidson, Newark, N. J.; G. Lef. de Bellefeville, Outremont, P. Q., Canada; Henry Dixon, Denver, Colo.; Frederick Dunn, Provo, Utah; William W. Elgin, Towson, Maryland; Harry H. Epstein, Trenton, New Jersey; Clayton J. Ettinger, Kalamazoo, Mich.; Abraham Ettleson, Elgin, Ill.; Millard H. Foster, Indianapolis, Ind.; Murray N. Fowler, Athens, Ohio; Kenneth Victor Francis, Iowa City, Ia.; Hugh Malcolm Galbraith, White Plains, New York; L. H. Gilman, Indianapolis, Ind.; Henry M. Goldstein Buffalo, New York; J. Berkeley-Gordon, Holmdel, N. J.; Roy W. Goshorn, Allentown, Pa.; James Davidson Grieve, Toronto, Ont., Canada; Uno Helmer Helgesson, Katonah, New York; Robert Battaile Hiden, Stockbridge, Mass.; John Rawson Howitt, Woodstock, Ont., Canada; McLean Houze, Toronto, Ont., Canada; Lionel Mortimer Ives, Waverly, Mass.; Simon O. Johnson, Tuskagee, Ala.; Ronald H. Kettle, Waverly, Mass.; Karl H. Langenstrass, Washington, D. C.; Frederick LeDrew Mattapan, Mass.; Erich Lindemann, Iowa City, Ia.; Louis S. London, New York City; Wilfrid T. MacNicoll, Waverly, Mass.; Harold Sinclair Magee, Trenton, N. J.; Lillian Malcove, New York City; Robert A. Matthews, Byberry, Phila., Pa.; Wilbur R. Miller, Iowa City, Ia.; Matthew Molitch, Jamesburg, N. J.; S. R. Montgomery, Whitby, Ont., Canada; Harry Merrill Murdock, Towson, Maryland; Juul C. Nielsen, Norfolk, Nebraska; Thomas Douglas Noble, Baltimore, Maryland; W. M. Pamphilon, Ward's Island, New York City; S. Harcourt Peppard, Hartford, Connecticut; Blake Daniels Prescott, Hartford, Connecticut; Charles

Raymer, Denver, Colo.; Charles Stanley Raymond, Waltham, Mass.; Leon Reznikoff, Secaucus, N. J.; Bernard Solomon Robbins, Towson, Maryland; Lindsay E. Robinson, Greystone Park, N. J.; Max Rossman, Allentown, Pa.; S. T. Rucker, Memphis, Tenn. Paul Schilder, New York City; Frank W. Schwarz, Coatesville, Pa.; Edward Maples Steger, San Diego, Calif.; Charles G. Stogdill, Toronto, Canada; J. B. Spradley, Trenton, N. J.; G. Marion Stranahan, New York City; Claude Uhler, Syracuse, New York; Simon Leonard Victor, New York City; Norman L. Walker, Toronto, Ont., Canada; Helen T. Warner, Hartford, Conn.; Frank F. Williams, Jr., Patton, Calif.; Robert O. Willmott, White Plains, N. Y.; Herman M. Turk, Lima, Ohio.

Transfers from membership to fellowship: Sylvia Allen, Winthrop College, Rock Hill, S. C.; W. E. Ash, Council Bluffs, Iowa; John H. Bell, Colony, Va.; Benjamin W. Black, Oakland, Cal.; Harriet E. Chalmers, Marlboro, Mass.; Donald W. Cohen, Buffalo, N. Y.; Agnes Conrad, New York, N. Y.; Harold F. Corson, Providence, R. I.; Paul T. Crosby, San Pedro, Cal.; Persis F. Elfield, Farnhurst, Dela.; William Charles Gaebler, Foxboro, Mass.; Joseph P. Gilbert, Nashville, Tenn.; Sol Wiener Ginsburg, New York, N. Y.; Ives Hendrick, Boston, Mass.; George S. Johnson, Denver, Colo.; M. M. Jordan, Worcester, Mass.; Siegfried E. Katz, New York, N. Y.; Milton E. Kirkpatrick, Grand Rapids, Mich.; Elizabeth Kundert, Northampton, Mass.; Alfred C. La Bine, Detroit, Mich.; Max Levin, Harrisburg, Pa.; D. O'Gorman Lynch, Penetanguishene, Ont., Canada.; Irville H. MacKinnon, New York, N. Y.; James L. McCartney, Elmira, N. Y.; Bradford J. Murphey, Colorado Springs, Colo.; Frank G. Norbury, Jacksonville, Ill.; Leo P. O'Donnell, Orangeburg, N. Y.; Gilbert J. Rich, Chicago, Ill.; James P. Sands, Philadelphia, Pa.; Mary G. Schroeder, Elgin, Ill.; Henry C. Schumacher, Cleveland, Ohio; Lowell S. Selling, Chicago, Ill.; Baruch Silverman, Montreal, Que., Canada; David Slight, Montreal, Que., Canada; Roy G. Smarr, Columbia, S. C.; Charles H. Standifer, Austin, Texas, Marianna Taylor, Boston, Mass.; J. L. Tower, Syracuse, N. Y.; Max O. Wolfe, Detroit, Mich.

The Council received and approved the report of the Executive Committee which reported its activities during the year. This committee report will be printed in full with other reports in the proceedings. But we may say at this time that the activities included the authorization for the expenditure of not more than $500 from the Association funds by the Committee on Arrangements to help defray the expenses of this meeting. The Council voted to authorize the Secretary-Treasurer to pay $250 to the National Conference on Nomenclature of Diseases as a contribution to help defray the expenses of that conference in carrying out the preparation and printing of a list of diseases.

The President introduced the discussion of the establishment of an office for the Association in the offices of the National Committee for Mental Hygiene with payment in part or in full by the Association of the salary of a person who might be selected to act as an executive secretary and as

business manager of THE AMERICAN JOURNAL OF PSYCHIATRY. After full discussion of the matter by the Council, it was decided to defer any action until a meeting of the Council to be held at five p. m., Tuesday, May 31, at which Dr. Hincks and Dr. Ruggles are to be invited to attend to present the viewpoint of the National Committee for Mental Hygiene on the matter.

The Secretary presented a communication from Dr. George Kline, inviting the Association to Boston for the 1933 meeting. Communications were also read from Dr. E. W. Cocke and other members of the Association, inviting the Association to hold the 1933 meeting in Memphis, Tennessee. Dr. Glenn E. Myers called attention to his invitation presented last year for the meeting to be held in Los Angeles. It was decided to defer any decision until further consideration at the meeting of the Council to be held on Wednesday.

PRESIDENT RUSSELL.—It is understood, of course, these candidates whose names have been presented for election will come up for ballot tomorrow morning.

The report of the Council, then, is before you for such action as you wish to take, whether to approve or not approve.

It was regularly moved, seconded and carried, that the report be received and approved.

PRESIDENT RUSSELL.—Next is the report of the Secretary-Treasurer. He will also make a statement for the Editor of THE AMERICAN JOURNAL OF PSYCHIATRY.

SECRETARY CHENEY.—The Secretary reports that the records of the Association show as of May 25, 1932, a total membership of 1375 as compared with a membership of 1356 last year. There are 12 honorary members, 56 life members, 4 corresponding members, 900 Fellows and 403 members.

The Treasurer reports that on May 15, 1931, there was a balance on hand of $22,888.29. The total receipts during the year, including this balance, were $34,985.32.

The disbursements were $8,499.60, leaving a balance on hand on May 25, of $26,485.72. That is a gain during the year of $3,597.43.

For the Editor of THE AMERICAN JOURNAL OF PSYCHIATRY, we have to say that on May 26, 1931, there was on hand a balance of $3,535.86, and on May 14, 1932, there was a balance on hand of $4,088.77, a gain of approximately $500 during the year.

PRESIDENT RUSSELL.—The practice is to refer the report of the Treasurer and the financial report of the JOURNAL to the Auditors for auditing and report back to the Association.

It was regularly moved, seconded and carried that the reports be referred to the Auditors.

PRESIDENT RUSSELL.—The Constitution requires that at this meeting, the members of the Committee on Nominations and of the Committee on Resolutions be named.

On the Committee on Nominations, I would name Dr. H W. Mitchell, Dr. William A. White, Dr. Arthur P. Noyes.

On the Committee on Resolutions, I would name Dr. E. S. Abbot, Dr. F. H. Allen, Dr. Emmett F. Hoctor.

The audience will please stand while the Secretary reads the names of those who passed away since our last meeting.

The audience stood while Secretary Cheney read the following names:

Harold W. Wright, M. D., Ojai, Cal., July 11, 1931.
Elisha H. Cohoon, M. D., Harding, Mass., July 24, 1931.
Emanuel S. Brodsky, M. D., Bridgeport, Conn., August 15, 1931.
William H. Hattie, M. D., Halifax, Nova Scotia.
John F. W. Meagher, M. D., Brooklyn, N. Y., August 25, 1931.
Theodore H. Kellogg, M. D., Riverdale, N. Y., September 20, 1931.
Ermy C. Noble, M. D., Mayview, Pa., October 21, 1931.
John H. Berry, M. D., Athens, Ohio, January 18, 1932.
Herman Ostrander, M. D., Kalamazoo, Mich., March 20, 1932.
Porter S. Dickinson, M. D., Kunenburg, Mass., March 17, 1931.
Anne T. Bingham, M. D., New York City.
George Donohoe, M. D., Cherokee, Iowa, May 14, 1932.
Gordon F. Willey, M. D., Albion, N. Y., May 23, 1932.
John M. Semple, M. D., Spokane, Wash.
Walter M. English, M. D., Brockville, Ontario, Canada, May 18, 1932.

PRESIDENT RUSSELL.—You must, I am sure, be shocked and grieved to hear among the names that of our President of only last year. It seems fitting that something more should be done as a tribute to him than simply have his name read, so I have asked one of his colleagues from Canada, Dr. George H. Stevenson, of Whitby, who knew him well, to make a few remarks.

DR. GEORGE H. STEVENSON.—Mr. President, the news of the death of our immediate past president, Dr. Walter Maitland English, comes to you with as much of a sense of shock as it came to those of us who have been closely connected with him when we first heard it some two weeks ago.

I have been asked by the President to say a few words regarding his life and death as one who knew him intimately, having begun the study of psychiatry under his direction and having been associated with him in the Ontario service ever since.

Those of you who were present at the meeting of this Association at Toronto last year will remember the heartiness of his greeting, his wonderful enthusiasm in the work of the convention and the dignity with which he presided over the sessions. Even at that time he knew that his days were numbered. Walking with him from a meeting of the Committee on Arrange-

ments a few days before the meeting, he told me of his faulty heart action and of his plans to retire from active service and of his proposed visit to England and the south of France for the benefit of his health, and added without any sign of fear or anxiety that it was more than doubtful if he would live until spring to return to Canada, as he hoped to do.

Few of you knew that all the effort and enthusiasm he put into that convention to make it a success were the result only of his indomitable courage and self-sacrificing devotion to the welfare of this organization.

Dr. English began the practice of medicine in the city of London, Ontario, later specializing in surgery and still later accepting the chair of Sanitary Science at the University of Western Ontario. At a time when our Ontario Hospital Service needed capable leadership, he was invited to associate himself with the work of caring for the mentally ill and for nearly a quarter of a century he directed the activities of two of our Ontario hospitals, first at Hamilton, and later at Brockville, with wisdom and success, and it is only fair to say of our deceased ex-president that his chief interest in life was the welfare of his patients and providing them with every known facility for their restoration to health. His interest in clinical psychiatry was continuous; new forms of treatment were tried out enthusiastically as the paper he read before this Association some three years ago on the manganese treatment of schizophrenia clearly indicated as well as his presidential address on the social treatment of mental deficiency.

He was also a tower of strength and a wise counsellor to the junior physicians who were fortunate enough to receive their training from him.

He had a lifetime interest in questions affecting the public good and in organizations devoted to public welfare. A valuable hobby was his interest in clean sport and he did much to promote and aid such sports as football, cricket, curling and lawn bowling, in the last two of which he was personally proficient.

He gave of himself and his means generously to every worthy cause. His personal courage was remarkable and was clearly shown when a disastrous fire occurred a few years ago at the Hamilton Hospital. Taking a line of hose up a ladder at a dangerous point, he directed the stream of water with no regard for his own safety until the fire was under control.

Many honors came to him, but none he prized more than that conferred on him by this Association two years ago when it elected him to be its President, an honor that was particularly gratifying to his fellow Canadians.

In his passing, his family lose an affectionate husband and father, his friends lose one who never failed them, his patients lose a wise and sympathetic advisor and this Association loses an officer who worked ever for its upbuilding.

His death occurred at Oxford, England, on the eighteenth of May from myocardial failure. His remains were cremated and brought to Canada, being interred at Simcoe, Ontario. Shall we not all say—peace be to his ashes and to that courageous spirit which now rests from its labors.

PRESIDENT RUSSELL.—In accordance with a time-honored custom which doesn't seem to me to be quite so good as it has been on some other occasions, I have to retire temporarily from the chair and will ask the Vice President if he will preside.

Dr. James V. May, Vice President, took the chair.

CHAIRMAN MAY.—It is my great privilege and pleasure at this time to call upon Dr. William L. Russell for the presentation of the presidential address. Mr. President.

The audience arose and applauded.

President Russell read his address.

CHAIRMAN MAY.—I am going to take the liberty of asking one of our distinguished former presidents to express for the Association our appreciation of the most excellent and exceedingly interesting address to which we have just listened. Dr. Meyer, please!

DR. ADOLF MEYER (Baltimore, Md.)—*Mr. Chairman, Dr. Russell, Members of the Association:* I have a feeling as if the Association had sat in a kind of prayer, a kind of concentration of thought upon what is going on, what we have to meet, what opportunities we have. I think we owe to Dr. Russell our gratitude for what has been quite obviously the deep and consistent thought of an earnest worker for this last year. He has spoken from his association with the many committees that he had to keep spiritual and actual contact with, and he has given us a conception of what we as a unit and as individuals in the Association may well go on thinking, not only for this year, for this meeting, but for a good long time.

As a friend and as an individual who has had many years of contact with you, Dr. Russell, I want to express the thanks of the Association and my personal thanks.

President Russell resumed the chair.

PRESIDENT RUSSELL.—There will be time for at least one paper this morning. It appears this is a subject that has been scheduled for discussion at the round table this evening, so there will be no discussion on this paper here. The paper is "Present Trends in American Psychiatric Research," by Drs. J. C. Whitehorn and Gregory Zilboorg, of Waverley, Mass., and New York City, respectively.

Dr. Whitehorn presented the paper.

PRESIDENT RUSSELL.—As already announced, the discussion of this paper will be deferred until the round table this evening.

The meeting adjourned at twelve-ten o'clock.

SECTION I—STUDIES IN PATHOLOGY.

TUESDAY AFTERNOON, MAY 31, 1932.

The meeting convened at two-ten o'clock, President Russell presiding.

PRESIDENT RUSSELL.—Come to order, please.

One of the unpleasant things about presiding is that it is necessary to hold to a time schedule. Twenty minutes are allowed for papers and five minutes for discussion for those that are announced for discussion, and the others three minutes, unless by vote of the audience it is decided that the time will be extended.

The first paper this afternoon is "Cerebral Birth Conditions; The Factor of Subarachnoid Hemorrhage," by Dr. C. A. Patten, and Dr. B. J. Alpers, of Philadelphia.

Dr. Alpers presented the paper.

PRESIDENT RUSSELL.—The Chairman of the Program Committee tells me that the plan of this program is to have all the papers presented, one after the other, and to reserve the general discussion until the end of the final paper.

The next paper is "Acquired Hydrocephalus: Report of Two Cases Occurring in Adults," by Dr. Lydia B. Pierce, of Westborough, Mass.

Dr. Pierce presented her paper.

PRESIDENT RUSSELL.—The next paper is on "The Importance of the Small Blood Vessels of the Brain in Psychiatric Problems," by Dr. N. W. Winkleman, of Philadelphia.

Dr. Winkleman presented his paper.

PRESIDENT RUSSELL.—The next paper is "Localization of Consciousness and Emotion," by Dr. Leland B. Alford, of St. Louis. (No response.)

The next paper is "Encephalographic Findings in Schizophrenia," by Drs. Matthew T. Moore, David Nathan, Annie R. Elliott and Charles Laubach, of Philadelphia.

Dr. Moore presented the paper.

PRESIDENT RUSSELL.—The next paper is by Dr. Frederic Wertham, of New York City, on "The Unspecificity of the Histological Lesions of Dementia Paralytica."

Dr. Wertham presented his paper.

PRESIDENT RUSSELL.—I believe Dr. Alford has arrived. I will ask him to read his paper on "Localization of Consciousness and Emotion."

Dr. Alford presented his prepared paper.

PRESIDENT RUSSELL.—We will now proceed with the discussion of these papers. Of those who are scheduled to discuss the papers, I believe there is only one here, Dr. Christian. I will call upon him.

Papers were discussed by Dr. Thomas B. Christian.

PRESIDENT RUSSELL.—These papers are now open for general discussion. We shall be glad to hear from anybody who is interested. Perhaps Dr. Meyer will lead off.

These papers were discussed by Dr. Adolf Meyer, Dr. Thomas B. Christian, Dr. George Van Ness Dearborn, Dr. Oscar J. Raeder, Dr. Leland B. Alford, Dr. Jacob Kasanin, Dr. William Malamud, Dr. C. A. Patten, Dr. N. W. Winkleman and Dr. Matthew T. Moore.

The meeting adjourned at four fifty-five p. m.

SECTION II—DRUG AND FEVER THERAPY.

TUESDAY AFTERNOON, MAY 31, 1932.

The Session on Drug and Fever Therapy convened at two o'clock, the Vice-President, Dr. James V. May, presiding.

CHAIRMAN MAY.—What we have this afternoon in this Section is, in brief, a symposium on Drug and Fever Therapy. Before opening the symposium a paper entitled, "A Suggestion Relative to Classifying Nervous and Mental Diseases," by Dr. Lowell S. Selling, of Chicago, will be presented.

Dr. Selling presented his paper, illustrating with slides.

CHAIRMAN MAY.—This paper is open for a brief discussion. Is there any discussion? If not, we will go ahead with the symposium. The next paper is by Dr. Hinsie and Dr. Blalock on "Treatment of General Paralysis by Radiothermy." Dr. Blalock will present the paper.

Dr. Blalock presented "Treatment of General Paralysis by Radiothermy," illustrating with slides.

CHAIRMAN MAY.—Dr. Cocke, of Tennessee, will open the discussion of this paper.

The paper was discussed by Drs. E. W. Cocke, Clarence Neymann, Samuel H. Epstein, A. L. Skoog, Thomas A. Ratliff and Leland E. Hinsie.

CHAIRMAN MAY.—This is an exceedingly interesting subject and I know there are many more of you who would like to discuss it. I think it has been a very profitable discussion and the time has been well spent. We have other good things on the program and we will have to get along.

The next paper is "The Use of Fever Therapy in the Treatment of Functional Psychoses." This paper is to be presented by Dr. Stone. The paper is one written by Dr. Stone and Dr. Spradley.

Dr. Stone presented the paper on "The Use of Fever Therapy in the Treatment of Functional Psychoses," illustrating with charts.

CHAIRMAN MAY.—Dr. Selling will open the discussion of this paper.

This paper was discussed by Drs. Lowell S. Selling, Charles Englander and Robert G. Stone.

CHAIRMAN MAY.—"Changes in the Clinical Signs and Laboratory Findings in Various Types of Psychoses under the Influence of Subcutaneous Administration of Oxygen," by Dr. Notkin, Dr. Greeff, Dr. Pike and Dr. Killian. Dr. Pike will read the paper.

Dr. Pike presented the first part of the paper, Dr. Killian presented the slides.

The paper was discussed by Drs. Karl A. Bowman, F. H. Pike and John Notkin.

CHAIRMAN MAY.—The last paper of the afternoon is, "The Effect of the Administration of Sodium Amytal and Sodium Rhodanate on Mental Patients," by Meyer M. Harris, M. D., and Siegfried E. Katz, M. D. Dr. Katz will present this paper.

Dr. Katz presented this paper, illustrating with slides.

CHAIRMAN MAY.—This paper was to have been discussed by Dr. Walter J. Freeman, of Washington. I am advised that he is not present. Dr. Langenstrass has been invited to open the discussion.

Dr. Langenstrass presented a prepared discussion.

CHAIRMAN MAY.—Is there any other discussion? Will Dr. Katz or Dr. Harris close?

Dr. Harris closed the discussion.

CHAIRMAN MAY.—This concludes the program for the afternoon.

The meeting adjourned at five o'clock.

TUESDAY EVENING, MAY 31, 1932, 7 O'CLOCK.

The following program of round table discussions was carried out:

"ADEQUATE PSYCHOTHERAPY IN A PUBLIC MENTAL HOSPITAL."

Moderator: Dr. Richard H. Hutchings.

Discussers: Dr. Roscoe W. Hall, Dr. Lewis B. Hill, Dr. Leland E. Hinsie.

"Occupational Therapy."

Moderator: Dr. William A. Bryan.

Discussers: Dr. William Rush Dunton, Dr. Horatio Pollock.

"The Private Hospital."

Moderator: Dr. Frank P. Norbury.

Discussers: Dr. C. C. Burlingame, Dr. Robert B. Lamb, Dr. Thomas A. Ratliff, Dr. George P. Sprague.

"The Direction of Psychiatric Research."

Moderator: Dr. Albert M. Barrett.

Discussers: Dr. John C. Whitehorn, Dr. Hugo Mella.

"Psychiatry in Penology."

"The Application of the Group Method to Classification."

Moderator: Dr. William A. White.

Discussers: Dr. Victor C. Branham, Dr. Amos T. Baker.

"The Place of the State Hospital in the Community."

Moderator: Dr. Clarence A. Bonner.

Topics: 1. Equipment of the State Hospital Psychiatrist for work in the community. 2. The Psychiatric Social Worker in the State Hospital Service.

"Psychoanalytic Psychiatry."

Moderator: Dr. L. Pierce Clark.

Wednesday Morning Session.

June 1, 1932.

The meeting convened at nine forty-five o'clock, President Russell presiding.

President Russell.—The meeting will please come to order.

The first order of business is the report of the Council.

Secretary Cheney.—The Council met Tuesday afternoon at five p. m. The first order of business was the listening to an invitation from Dr. Cocke to hold the convention in Memphis in 1933. Dr. Cocke was supported by

Dr. Partlow, Dr. Pierson, Dr. Robert E. Lee Smith and Dr. Owensby in this request. The Council deferred decision as to the time and place of the next meeting.

Dr. Ruggles, the Chairman of the Scientific Administration Committee of the National Committee for Mental Hygiene, and Dr. Hincks, the Medical Director of the National Committee, appeared before the Council and discussed the organization of an office of The American Psychiatric Association in the offices of the National Committee for Mental Hygiene, a matter that was presented at the previous meeting of the Council and which was reported upon yesterday morning as having been discussed. After a full discussion, the Council voted the following: First, that the Council adopt the proposed arrangement * by which the National Committee for Mental Hygiene will furnish the Association with an office and clerical services without charge and authorize the Executive Committee of The American Psychiatric Association to carry it into effect.

Secondly, it was voted that when an office is thus provided, the Executive Committee is authorized to employ an executive assistant for the Association at a salary not to exceed $5000 a year, the Executive Committee to

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* Proposed Arrangement:

Permanent Headquarters and Executive Assistant.

Proposed Arrangement with the National Committee for Mental Hygiene.

National Committee:

1. To furnish Association with separate equipped office and clerical service without charge.

2. Office to be Association's: Name on door, bulletin in lobby, telephone directory, etc. Separate letter-heads, etc.

3. To pay half of Executive's salary if half time service of someone in present staff of committee is acceptable.

4. The National Committee to be free to discontinue the arrangement with the Association on three months' notice.

Association:

1. To appropriate $5000 a year for half or all of salary of Executive Assistant depending upon grade of person selected and arrangement with National Committee.

2. To pay for office supplies, postage, travelling expenses, etc.

3. The Association to be free to discontinue the arrangement with the National Committee on three months' notice.

Finance:

1. Executive assistant to take over business management of JOURNAL for which about $800 a year is now paid to Johns Hopkins Press.

2. To increase income of JOURNAL, by new subscribers and advertisements, at least $1000 a year.

3. To relieve the secretary of some details and attend to clerical services that are now paid for ($300).

specify and supervise his duties and to incur office and traveling expenses for the assistant not to exceed $1000 a year.

Third that the expenditure by the Executive Committee of The American Psychiatric Association of a sum not to exceed $6000 is hereby authorized for the above purposes for the year commencing July 1, 1932.

That vote of the Council on those matters is therefore before the Association for its consideration and approval or disapproval.

PRESIDENT RUSSELL.—Before asking for a motion, I would like to make a little further explanation. The Association has for many years, as stated yesterday in my address, been desirous of having a permanent headquarters and an organized staff. The National Committee for Mental Hygiene has very generously offered us the use of an office and this office will be the office of the Association; it will not be just an office room in the quarters of the National Committee for Mental Hygiene. It will be a separate office in connection, of course, with their suite of offices, but it will be the office of The American Psychiatric Association, and it will be so listed in the telephone books, on the bulletin at the foot of the elevator, and will have separate stationery. It will appear to be quite independent. They will give us clerical service. The funds of the Association are not adequate to enable it to organize a very high-grade staff, headed up by a paid medical secretary, but it seems possible to finance a business assistant. This executive assistant will take over the business management of the JOURNAL which is now attended to by the Johns Hopkins Press at a cost of about $800 a year. He will also be able to increase, if he is the right kind of a man, and it is important that he should be, the income of the JOURNAL. From the experience of other organizations and other journals it appears that the JOURNAL is not bringing in the income it ought to. There ought to be more profitable advertisements and the circulation outside of the Association should be increased. It is believed that an executive assistant will accomplish that.

(Also to relieve the Secretary of other details which he now attends to personally, assist at meetings, aid committees with correspondence, etc.)

Appropriation for salary		$5000
Appropriation for expenses		1000
		$6000
Savings on JOURNAL cost	$800	
Increased income from JOURNAL	1000	
Savings on secretary's expenses	300	$2100
Net cost to Association annually		$3900

Cost to be met from accumulated funds of over $20,000 and from current income of Association for a trial period of five years, with expectation that before end of the period other funds will become available.

He will also be able to do a certain amount of the work that now has to be attended to by the Secretary and with help which costs in the neighborhood of about $600 or $700 a year. That couldn't all be turned over to him. We would have to feel the way a little bit. We have estimated, though, it would save about $300 in the Secretary's office and we believe that the income from the JOURNAL could be increased not less than $1000. That seems to be a very moderate estimate, so there would be $2100 we feel we could count on in what you might call additional income. The balance of income over current expenditures the past year was in the neighborhood of $4000, so that all together we would have nearly $6000 without drawing on the principal. The Association has a principal fund in the neighborhood of $25,000, in round figures.

This arrangement can be discontinued at any time. The Council thought it would be wise to undertake it for one year at least, to try it out as an experiment, with the hope that it might be permanent. If the arrangement with the National Committee was not satisfactory, we could, if we wanted to, rent an office if we could finance it. We believe, though, it is the beginning of a permanent headquarters and staff which we have all wanted and we believe it is worth while to try it.

Perhaps all do not know exactly or have not in mind the make-up of the Executive Committee. The Executive Committee of the Association consists of the President, the Vice President, the Secretary and two members of the Council elected by the Council. That committee would be charged with the duty of organizing this office, of looking after the interests of the Association, of supervising and employing the executive assistant and supervising his work and seeing that the project is carried out successfully, if possible.

With this explanation, this report of the Council is before you for action. The Chair will consider a motion to approve or disapprove so as to bring it definitely before the meeting for discussion.

DR. LESSER KAUFFMAN.—I move the adoption of the report.

The motion was seconded.

PRESIDENT RUSSELL.—It is moved and seconded the report of the Council as read be received and adopted by the Association. The subject is open now for discussion; if anybody wishes to discuss it, we would be glad to hear from them.

The motion was put to a vote and carried.

PRESIDENT RUSSELL.—The next business is election of members.

SECRETARY CHENEY.—There have been distributed through the audience the lists of names of candidates for fellowship, and for membership in the Association, which have been passed on by the Membership Committee approved by the Council, as was indicated in the report of the Council yesterday morning.

The first group of Fellows' applications are for final election this year. It is in order to receive a motion to elect the group of Fellows whose applications were approved last year and who would become Fellows this year.

PRESIDENT RUSSELL.—The usual procedure is for somebody to move that the Secretary be authorized to deposit one ballot for the election, otherwise the ballots would have to be collected.

DR. ALBERT ANDERSON.—I so move, Mr. President.

The motion was seconded, put to a vote and carried.

SECRETARY CHENEY.—The next group is one of thirty-six applicants for fellowship which have been approved by the Council and the Membership Committee, and if accepted by the Association will lie over until next year for final action. A motion is in order to accept these applications and approve them for final election next year.

DR. ALBERT ANDERSON.—I make that motion.

The motion was seconded, put to a vote and carried.

SECRETARY CHENEY.—The next group is 71 applicants for membership, which also have been approved by the Membership Committee and the Council. They are before you now for election to the Association as members this year. A motion is in order to elect these applicants as members of the Association.

DR. ALBERT ANDERSON.—I move they be elected.

The motion was seconded.

PRESIDENT RUSSELL.—I judge the intention is the Secretary should cast one ballot.

DR. ANDERSON.—Yes.

The motion was put to a vote and carried.

SECRETARY CHENEY.—The ballot has been cast.

PRESIDENT RUSSELL.—There seems to be no unfinished business, which is the next order on the program.

Next is the report of the Auditors. Dr. Pierson is the Chairman.

SECRETARY CHENEY.—*To The American Psychiatric Association:* We report that we have checked the vouchers and balances of the Secretary-Treasurer for the year ending May 25, 1932, and have found them correct, the balance being $26,485.72.

We have checked the vouchers of the Editor of THE AMERICAN JOURNAL OF PSYCHIATRY and have found them correct.

CLARENCE PIERSON,
MARCUS A. CURRY,
PAUL G. TADDIKEN,
Auditors.

PRESIDENT RUSSELL.—You have heard the report. What action will you take?

DR. ALBERT ANDERSON.—I move it be accepted and filed.

The motion was seconded, put to a vote and carried.

PRESIDENT RUSSELL.—Next is the report of the Nominating Committee. The Chairman is Dr. Mitchell.

DR. H. W. MITCHELL.—*Mr. President and Members of the Association.* The Nominating Committee appointed to select candidates for officers to be elected at the eighty-eighth annual meeting of The American Psychiatric Association submit their recommendations for action of the members: President, James V. May, M. D., Superintendent, Boston State Hospital, Boston, Mass.; Vice President, George H. Kirby, M. D., Professor of Psychiatry, Columbia University, New York City; Honorary Vice President, Morgan B. Hodskins, M. D., Superintendent, Monson State Hospital, Palmer, Mass.; Secretary, Clarence O. Cheney, M. D., Director, New York State Psychiatric Institute and Hospital, New York City; Councillors for two years: Clarence B. Farrar, M. D., Director, Toronto Psychiatric Hospital, Toronto, Canada, to succeed the late Wm. M. English, M. D.; F. A. Carmichael, M. D., Superintendent, Osawatomie State Hospital, Osawatomie, Kans., to succeed the late George O. Donohoe, M. D.; Councillors for three years: William L. Russell, M. D., the retiring President of the Association; Ross McC. Chapman, M. D., Superintendent of the Sheppard and Enoch Pratt Hospital, Towson, M. D.; C. F. Williams, M. D., Superintendent of the South Carolina State Hospital, Columbia, S. C.; George F. Inch, M. D., Superintendent, Ypsilanti State Hospital, Ypsilanti, Mich.; Auditor for three years: Hugh C. Henry, M. D., Superintendent, Central State Hospital, Petersburg, Va.

Respectfully submitted,
H. W. MITCHELL, M. D., *Chairman,*
WILLIAM A. WHITE, M. D.,
ARTHUR P. NOYES, M. D.

PRESIDENT RUSSELL.—The Nominating Committee has discharged its duties, but it is quite in order for anybody else, any member or Fellow, to make other nominations.

DR. ARTHUR F. KILBOURNE.—I move, Mr. President, the report of the Nominating Committee be approved and these officers be elected.

The motion was seconded.

PRESIDENT RUSSELL.—If there are no other nominations, this motion will be in order. I think it should be in the form of a single ballot perhaps, cast by the Secretary. I will so understand.

You have heard the motion that the Secretary be empowered to deposit one ballot for the election of officers as presented by the Nominating Committee.

The motion was put to a vote and carried.

SECRETARY CHENEY.—The Secretary casts the ballot.

PRESIDENT RUSSELL.—Is there any new business to come before the Association?

The scientific session will be divided into two sections, just as yesterday.

PRESIDENT RUSSELL.—We will now proceed with the scientific session. The general topic is "Psychotherapy, not Psychoanalytic." By request of the Committee on Program, there will be a little transposition of papers. Dr. Thom, whose paper is announced on page 27 of the program, will read his paper first. The topic is "Psychotherapy in Private Practice," by Douglas A. Thom, of Boston.

Dr. Thom presented his paper.

PRESIDENT RUSSELL.—General discussion of these papers will be after the last paper has been read.

The next paper is on "Intensive Psychotherapy in a Hospital Clinic," by Dr. Lauren H. Smith, of Philadelphia.

Dr. Smith presented his paper.

PRESIDENT RUSSELL.—The next paper on the program is entitled, "Psychotherapeutics at Stockbridge," by Dr. Horace K. Richardson and Dr. Austen F. Riggs, of Stockbridge, Mass.

Dr. Richardson presented the paper.

PRESIDENT RUSSELL.—The title of the next paper is "Practical Modes of Treatment in Handling Mental Hygiene Problems in a University," by Dr. Sidney Kinnear Smith, of Oakland, California.

Dr. Smith who prepared this paper is unable to be present, I believe on account of illness. In order to round out the presentaiton, however, the Program Committee has requested Dr. Glenn Myers, of California, to give a brief synopsis of this paper.

DR. GLENN MYERS (Los Angeles, Cal.).—*Mr. Chairman and Gentlemen:* Dr. Smith is a psychiatrist in a large university, the University of California, and from 1924 until 1932 he has made a study of cases that have come to his observation, and what I have to present of his paper is essentially a statistical review of 1000 of such cases.

Dr. Myers presented a review of Dr. Smith's paper.

PRESIDENT RUSSELL.—The last paper in the series is on "Hypnosis and Allied Forms of Suggestion in Practical Psychotherapy," by Dr. Oscar J. Raeder, of Boston.

Dr. Raeder presented his paper.

PRESIDENT RUSSELL.—This is the last paper of the series, and let me repeat the general topic is "Psychotherapy, not Psychoanalytic." Discussion may be directed to the general topic or any particular topic that has been discussed in any paper.

The first scheduled person to discuss the papers is Dr. Joseph C. Michael, of Minneapolis.

The papers were discussed by Dr. Joseph C. Michael, Dr. Glenn E. Myers, Dr. Isador H. Coriat, Dr. A. Sandor Lorand, Dr. Arthur H. Ruggles, Dr. Paul Schilder and Drs. Theodore R. Robie, H. H. Hart, George Van Ness Dearborn, Charles Macfie Campbell, Ralph A. Noble, Lauren H. Smith, Horace K. Richardson and Oscar J. Raeder.

The meeting adjourned at twelve-fifty o'clock.

SECTION II—CLINICAL STUDIES.

WEDNESDAY MORNING, JUNE 1, 1932.

The meeting convened at ten-ten o'clock, Dr. May presiding.

CHAIRMAN MAY.—The subject for the morning is Clinical Studies. The first paper is, "The Relation of Menstruation to Personality Disorders," by Dr. Allen and Dr. Henry. Dr. Allen is to read the paper.

Dr. Allen presented the first part of the paper. Dr. Henry illustrated the paper with slides.

CHAIRMAN MAY.—This paper is open for discussion and I will call on Dr. Elizabeth Spencer McCall, of Philadelphia.

The paper was discussed by Drs. Elizabeth Spencer McCall, Abraham Myerson, W. W. Hawke, Cornelius C. Wholey, Edward B. Allen and George W. Henry.

CHAIRMAN MAY.—The subject of the next paper is "The Dynamics of Psychiatric Reaction Type Determination," by Dr. William Malamud and Dr. Eric Lindemann; Dr. Malamud will present the paper.

Dr. Malamud presented the paper.

CHAIRMAN MAY.—The discussion of this paper will be opened by Dr. Malcolm A. Bliss of St. Louis, Missouri.

The paper was discussed by Dr. Malcolm A. Bliss, Dr. Paul Schilder and Dr. William Malamud.

CHAIRMAN MAY.—The next paper is, "The Importance of Early Diagnosis in General Paresis," by Dr. Baugh.

Dr. F. C. H. Baugh, of Guelph, Ontario, presented his paper.

CHAIRMAN MAY.—I will ask Dr. A. H. Pierce, of Coatesville, Pennsylvania, to discuss this paper.

The paper was discussed by Dr. A. H Pierce, Dr. Malcolm A. Bliss, Dr. G. H. Stevenson, Dr. William Malamud and Dr F. C. H. Baugh.

CHAIRMAN MAY.—My attention has been called to the fact that it will be necessary to make a slight change in the program here. The next paper to be presented, therefore, will be that of Dr. Cornelius C. Wholey, of Pittsburgh, "A Multiple Personality." Dr. Wholey.

Dr. Wholey presented his paper, illustrating with moving pictures.

CHAIRMAN MAY.—I will ask Dr. Lloyd H. Ziegler, of Albany, if he will discuss this paper.

This paper was discussed by Dr. Lloyd H. Ziegler and Dr. Cornelius C. Wholey.

CHAIRMAN MAY.—We will be unable to finish the morning's program as printed. Dr. Kasanin has consented to give his paper the first thing this afternoon.

The meeting adjourned at twelve forty-five o'clock.

SECTION I—PSYCHOTHERAPY FOR CRIMINALS.

WEDNESDAY AFTERNOON, JUNE 1, 1932.

The meeting convened at two-five o'clock, President Russell presiding.

PRESIDENT RUSSELL.—The section will please come to order.

The first paper this afternoon in this series of papers is on "Preliminary to Psychotherapy of Criminals," by Dr. Benjamin Karpman, of Washington, D. C.

Dr. Karpman presented his paper.

PRESIDENT RUSSELL.—There will be no discussion of the papers in this series until the last one has been read.

The next paper is on "Psychotherapy in a Training School," by Dr. Manly B. Root, of Westboro, Mass.

Dr. Root presented his paper.

PRESIDENT RUSSELL.—The Chairman of the Committee on Program has agreed to take the chair.

Dr. Hamilton took the chair.

CHAIRMAN HAMILTON.—The next paper is "Psychotherapy in the State School for Boys at Industry, New York," by Dr. Eric Kent Clarke, of Rochester, N. Y.

Dr. Clarke presented his paper.

CHAIRMAN HAMILTON.—The next paper, "Psychiatry in Penal and Correctional Institutions," will be presented by Dr. John A. Larson, of Chicago.

Dr. Larson presented his paper.

CHAIRMAN HAMILTON.—I will now call for: "The Readjustment of Criminals," by Dr. Franz Alexander, of Boston.

Dr. Alexander presented his paper.

CHAIRMAN HAMILTON.—A considerable number of our membership has had and is having opportunity to study and classify offenders, criminals; the number who has had the opportunity to do psychotherapy with them is smaller. You have listened to five papers that throw light on this problem from different angles.

We have plenty of time for discussion. I have no doubt that there are many who are prepared to say things, perhaps of considerable importance, before the session is closed.

The discussion will be opened by Dr. Herman Adler.

The papers were discussed by Drs. Herman Adler, P. C. Robertson, Amos T. Baker, William Malamud, Frederic Wertham, Abraham Myerson, R. M. Schley, John D. Reichard, Benjamin Karpman, Manly B. Root, Eric Kent Clarke, John A. Larson and Franz Alexander.

The meeting adojurned at five-five o'clock.

SECTION II—CLINICAL STUDIES.

WEDNESDAY AFTERNOON, JUNE 1, 1932.

The meeting convened at two o'clock, Dr. May presiding.

CHAIRMAN MAY.—Before we take up the program of the afternoon, Dr. Jacob Kasanin will read his paper, which was to have been presented this morning but which was deferred because of lack of time. The paper is on "The Acute Schizoaffective Psychoses."

Dr. Kasanin presented his paper.

CHAIRMAN MAY.—I will ask Dr. Polozker to open the discussion.

The paper was discussed by Drs. I. L. Polozker, E. Von Domarus and J. Kasanin.

CHAIRMAN MAY.—Owing to a slight change in the program I will next call on Dr. Howard W. Potter to present his paper on "Schizophrenia in Children."

Dr. Potter presented his paper, illustrating with slides.

CHAIRMAN MAY.—Dr. Henry I. Klopp will please open the discussion of this paper.

The paper was discussed by Dr. Henry I. Klopp and Dr. Howard W. Potter.

CHAIRMAN MAY.—The next paper we will listen to is by Dr. Baldwin L. Keyes on "The Treatment of Adolescent Psychoses." Dr. Keyes.

Dr. Keyes presented his paper, illustrating with slides.

CHAIRMAN MAY.— Dr. William C. Garvin of Binghamton, New York, has been asked to open the discussion of this paper. Is Dr. Garvin here? If not, the paper is open for discussion.

The next paper, there being no discussion of Dr. Keyes paper on the program, is "The Significance of the Complaint Factor in Child Psychiatry," by Dr. Leo Kanner of Baltimore, Maryland.

Dr. Kanner presented his paper.

CHAIRMAN MAY.—The discussion will be opened by Dr. Wilson K. Dyer of Chillicothe, Ohio.

The paper was discussed by Dr. Wilson K. Dyer, Dr. George S. Stevenson and Dr. Leo Kanner.

CHAIRMAN MAY.—The next paper is on "Mental Phenomena Observed in Cases of Brain Tumor," by Dr. George W. Henry of White Plains.

Dr. Henry presented his paper.

CHAIRMAN MAY.—The Program Committee has arranged for Dr. A. L. Skoog of Kansas City to open the discussion of this paper.

The paper was discussed by Drs. A. L. Skoog, Francis E. Weatherby and George W. Henry.

CHAIRMAN MAY.—My presence at a meeting of the Council makes it imperative for me to ask Dr. J. Ramsay Hunt of New York if he will be kind enough to take the chair.

Dr. J. Ramsay Hunt assumed the chair.

CHAIRMAN HUNT.—The next paper will be on "Physical Therapy in Mental Hospitals," by Dr. H. F. Hoffman of Allentown, Pennsylvania.

Dr. Hoffman presented his paper.

CHAIRMAN HUNT.—I will ask Dr. Carr to open the discussion. As he is not here, is there any other member of the Association who would like to discuss this paper?

The paper was discussed by Drs. Arthur P. Noyes, Charles Englander and Harry F. Hoffman.

CHAIRMAN HUNT.—This concludes the program for the afternoon.

The meeting adjourned at five-forty o'clock.

WEDNESDAY EVENING, JUNE 1, 1932, 8.30 O'CLOCK.

The members assembled to hear the annual address "The Brain Problem in Relation to Weight and Form" by Henry Herbert Donaldson, Ph. D., Sc. D., of the Wistar Institute, Philadelphia, Pa. After the address, the President held a reception followed by a buffet supper and dancing.

SECTION I—THE OUT-PATIENT WORK OF MENTAL HOSPITALS.

THURSDAY MORNING, JUNE 2, 1932.

The meeting convened at nine forty-five o'clock, President Russell presiding.

PRESIDENT RUSSELL.—The first item on the program this morning is the report of the Council and the report of the time and place of the next meeting.

SECRETARY CHENEY.—The Council met yesterday afternoon and this morning and voted, first, to accept and approve the reports of the following committees: Committee on Medical Services, the Council calling particular attention to the recommendation of the committee, which it approved, that a qualified medical superintendent should be in charge of institutions for mental patients: Committee on Statistics; Committee on Nursing; Committee on Legal Aspects of Psychiatry; Committee on Activities of the Neuropsychiatric Division of the Veterans Bureau; Committee on Research; Committee on Psychiatric Social Work and Committee on Ethics, and to refer the recommendations of these committee reports to the Committee on Resolutions.

The Council received the report of the Committee on the Revision of the Constitution by Dr. Bond, and it was voted to ask Dr. Bond as Chairman of that committee to present the notice of the proposed revisions of the Constitution from the floor of the Association this morning.

The Council voted to recommend to the association the election of Dr. William H. Welch of Baltimore, Md., as an honorary member at this meeting.

The Council received a communication from Dr. Theodora Wheeler, of Rochester, Minnesota, regarding the indexing of the first eighty-eight volumes of THE AMERICAN JOURNAL OF INSANITY AND THE AMERICAN JOURNAL OF PSYCHIATRY, and the Council voted to authorize the editor of the JOURNAL OF PSYCHIATRY to expend, if necessary, not more than $500 from the JOURNAL'S funds for this indexing, which has been carried out thus far through the efforts of Dr. Theodora Wheeler. The Council also voted the thanks of the Council and Association to Dr. Wheeler for her outstanding efforts and interest in this project.

The Council received application from six Fellows of the Association for the formation of a standing Committee on Penology and voted to defer action on this request at this time.

The Council voted this morning to hold the 1933 annual meeting of the Association in Boston, Massachusetts, the exact date and the hotel to be decided by the Executive Committee after consultation with the Committee on Local Arrangements which will be appointed.

The Council elected the following members as its Executive Committee for the coming year: The President, Dr. James V. May; the Vice President, Dr. George H. Kirby; the Secretary, Dr. Clarence O. Cheney, and two Councillors, Dr. William L. Russell and Dr. William C. Sandy.

PRESIDENT RUSSELL.—The report of the Council is before you for action. Will somebody make a motion as to whether it be approved and adopted?

DR. E. S. ABBOT.—I move the report be accepted and placed on file.

The motion was seconded by Dr. Meyer.

PRESIDENT RUSSELL.—It should be accepted with approval I assume.

The motion was put to a vote and carried.

PRESIDENT RUSSELL.—You have heard the action of the Council in regard to the election of Dr. William H. Welch as honorary member. That is recommended by the Council but it will have to be voted on by the Association. It requires a two-thirds vote, I think, if somebody will make a motion that he be elected by ballot of the Secretary.

DR. BLISS.—I move, Mr. Chairman, it be approved by a rising vote.

The motion was seconded, put to a vote and carried.

PRESIDENT RUSSELL.—It seems to be unanimous. If there are any against it, will you please rise and let us see you?

I will now call on Dr. Bond to explain the Constitution.

DR. EARL BOND.—Mr. President, the report of the Committee on Revision of the Constitution has been furnished in full to the Secretary and to the Council. I want to summarize it to the Association.

There are many articles which have simply been brought up to date and which, I am sure, will receive no adverse criticism from anyone. There are other articles in which important changes have been made.

In Article II, the objects of the Association have been expressed in modern terms.

In Article III, which concerns membership, important changes are as follows: An examining board of five Fellows has been set up to be appointed by the President and approved by the Council. It shall be the duty of this board to make a report and recommendation to the Council on every application for every kind of membership.

It shall also be the duty of this board immediately after its organization and from time to time afterward to submit to the Council plans for the procedures which it will need to pass upon the fitness of new applicants for membership.

Three grades of ordinary membership have been set up; the first, associate members who have had at least one year's practice in a mental hospital. Contact with the Association, in other words, will have to be made in this way. Members shall be those physicians who have engaged exclusively in the practice of psychiatry for three years, and fellows, physicians who have engaged in the same practice for six years. There is provision also for a second group of associate membership, physicians who are experienced or distinguished in branches of science pertaining to psychiatry.

There are no changes in other kinds of membership.

In the officers, it was decided to add a President-elect who would take office a year after his election.

In Article VI a Nominating Committee has been set up which shall be appointed a month after a new President comes into office. Arrangements are made for this committee, which consists of five members appointed from the Association and two from the Council, to have its ticket published and sent out to all members at least one month before the annual meeting; and provisions are made that other nominations, other tickets, may be presented from the floor.

Other changes are minor up to Article VII where it provides that the Treasurer shall be bonded.

Arrangements have been made so that amendments to the Constitution will require the present year's notice, and consideration at two consecutive yearly meetings, but amendments to the by-laws may be made with three months' notice, at any annual meeting.

Into the by-laws have been collected all directions for conducting the meetings. All old by-laws have been retained and one new one added.

Article VI of the by-laws provides that when twenty Fellows or members or associates shall present to the Secretary in writing an application for a section and such application has the approval of the Council, a new section shall be set up which shall elect its own chairman and control its own program.

Of course, it is understood that this, the fifth draft of the Constitution which has been considered by the Committee on Revision, will be published

in the JOURNAL soon and then will be ready for adoption by the Association next year, amended as the Association may see fit.

PRESIDENT RUSSELL.—The Association is very deeply indebted to this committee for the great labor they have put on this revision of the Constitution. It is understood now that it lies over for another year before action and will be published in the JOURNAL. So look for it in the JOURNAL. It is not likely that it will be sent out by mail in separate form, but it seems to be according to the Constitution that it is sent to every member and Fellow in the JOURNAL. So that I hope none of us will fail to study it carefully before the time for action comes.

We will now proceed to the scientific program.

PRESIDENT RUSSELL.—The topic of the morning in this section is "The Out-Patient Work of Mental Hospitals."

The first paper will be on "Problems of Out-Patient Work in Mental Health Clinics," by Dr. Clarence A. Bonner, of Hathorne, Mass.

Dr. Bonner presented his paper.

PRESIDENT RUSSELL.—As in previous sessions where there is a general topic, there will be no general discussion until after all the papers have been read.

The next paper is "The Out-Patient Work of the Delaware State Hospital," by Dr. M. A. Tarumianz, of Delaware.

Dr. Tarumianz presented his paper.

PRESIDENT RUSSELL.—I feel sure that the best wishes of the Association go to Dr. Tarumianz regarding his appropriations to carry on this important work.

The next paper is on "Psychiatric Treatment in Out-Patient Child Guidance Clinics," by Dr. Samuel W. Hartwell, of Worcester, Mass.

Dr. Hartwell presented his paper.

PRESIDENT RUSSELL.—The next paper is on "Extramural Mental Clinics in Cities with a Population of Twenty-Five Thousand to One Hundred Thousand Inhabitants," by Dr. Ross D. Helmer, of Utica, N. Y.

Dr. Helmer presented his paper.

PRESIDENT RUSSELL.—The next paper is entitled "The Grafton State Hospital Clinic," by Dr. Anna C. Wellington, of North Grafton, Mass.

Dr. Wellington presented her paper.

PRESIDENT RUSSELL.—It will be generally conceded, I think, that this clinic development is one of the most important developments in mental hospital work that is occurring at the present time and these papers have brought out a number of very practical clinical interests and issues.

The general topic is "The Out-Patient Work of Mental Hospitals," and the discussion may be directed to any special topic that has been dealt with in the papers,.

The first designated speaker to discuss the papers is Dr. D. W. Griffin, of Norman, Oklahoma.

The papers were discussed by Drs. D. W. Griffin, Frederick H. Allen, George Van Ness Dearborn, J. J. Williams, J. Allen Jackson, Sanger Brown, Ross D. Helmer, George S. Stevenson, Guy Payne, Clarence A. Bonner, Samuel W. Hartwell and M. A. Tarumianz.

The meeting adjourned at twelve-thirty o'clock.

SECTION II—THEORY.

THURSDAY MORNING, JUNE 2, 1932.

The meeting convened at ten-fifteen o'clock, Dr. May presiding.

CHAIRMAN MAY.—Owing to the pressure of other matters which require my attention at this time, I am going to ask Dr. Glenn Myers, of California, if he will be kind enough to take the chair.

Dr. Glenn E. Myers, Los Angeles, California, assumed the chair.

CHAIRMAN MYERS.—As announced, Dr. Glueck's paper will not be read here this morning but will be read tomorrow. Dr. Hill's paper will be substituted for this paper.

The first paper on the program of the morning is "Deletion of Function and Adaptive Compromise," by Dr. Donald Gregg.

Dr. Gregg presented his paper.

CHAIRMAN MYERS.—Dr. McGraw, of New York City, is to open the discussion.

The paper was discussed by Drs. Robert B. McGraw, Adolf Meyer, E. Stanley Abbot and Donald Gregg.

CHAIRMAN MYERS.—The next paper is on "Inter-relations Between Psychoanalysis and the Experimental Work of Pavlov," by Dr. Thomas M. French of Chicago.

Dr. French presented his paper.

CHAIRMAN MYERS.—The discussion of Dr. French's paper will be opened by Dr. C. Macfie Campbell of Boston.

The paper was discussed by Drs. C. Macfie Campbell, Isador Coriat, Gregory Zilboorg, Paul Schilder, Adolf Meyer, Abraham Myerson and Thomas M. French.

CHAIRMAN MYERS.—The next paper is that entitled, "The Mechanistic Approach to the Study of Abnormal Behavior," by Dr. Milton Harrington of Glens Falls, New York.

Dr. Harrington presented his paper.

CHAIRMAN MYERS.—Dr. Groves Smith will discuss this paper.

The paper was discussed by Dr. Groves B. Smith and Dr. E. Von Domarus.

CHAIRMAN MYERS.—The next paper is substituted for Dr. Glueck's paper and is entitled, "Hallucinations in Psychoses," by Dr. Joel M. Hill of New York.

Dr. Hill presented his paper.

CHAIRMAN MYERS.—Does someone wish to discuss Dr. Hill's paper?

The paper was discussed by Dr. Richard H. Hutchings.

CHAIRMAN MYERS.—Does anyone else wish to say anything about Dr. Hill's paper? Dr. Hill, have you anything to say in conclusion?

DR. HILL.—I have nothing else to add.

The meeting adjourned at twelve forty-five o'clock.

SECTION I—THE OUT-PATIENT WORK OF MENTAL HOSPITALS.

THURSDAY AFTERNOON, JUNE 2, 1932.

The meeting convened at two-ten o'clock, Dr. Samuel W. Hamilton presiding.

CHAIRMAN HAMILTON.—The first paper is by Dr. Leroy M. A. Maeder on "Organization of a State-wide Mental Hygiene Committee with Special Reference to its Relationship to the Medical Profession."

Dr. Maeder read his paper.

CHAIRMAN HAMILTON.—For reasons that are important, the second section has just been called to order. Anyone in this room therefore who wants to participate in its proceedings might leave now.

The discussion of Dr. Maeder's paper will be opened by Dr. J. Allen Jackson, of the Danville State Hospital.

The paper was discussed by Drs. J. Allen Jackson and George K. Pratt.

CHAIRMAN HAMILTON.—Who will participate in the discussion? It sounds as if there were a difference of opinion but perhaps this is not the time when you wish to follow the matter up.

I might say for the Association that we are indebted very much to this mental hygiene organization in that it has furnished us the important and extensive aid that Dr. Maeder has given to the organization at this meeting.

Dr. Maeder, will you conclude the discussion?

Dr. Maeder closed the discussion of this paper.

CHAIRMAN HAMILTON.—The next presentation will be by Dr. Herman M. Adler. This is a short paper, he tells me, on "The Age Distribution of Admissions to State and Federal Institutions."

Dr. Adler presented his paper.

CHAIRMAN HAMILTON.—Is there any discussion?

The paper was discussed by Dr. Horatio M. Pollack and by Dr. Adler in closing.

CHAIRMAN HAMILTON.—I will now call for: "What the Community Expects of the State Hospital," by Dr. George K. Pratt, of New York.

Dr. Pratt presented his paper.

President Russell took the chair.

PRESIDENT RUSSELL.—The next paper is entitled, "Psychiatric Experiences in a Medical Out-Patient Clinic," by Dr. Roland A. Jefferson, of Denver.

Dr. Jefferson presented his paper.

PRESIDENT RUSSELL.—The next paper is "A Mental Hygiene Clinic in a General Hospital," by Dr. George H. Reeve, of Cleveland, Ohio.

Dr. Reeve presented his paper.

Secretary Cheney took the chair.

CHAIRMAN CHENEY.—These papers are now open for discussion. Is Dr. Barrett in the room? (No response.)

Dr. Philip Smith will you please open the discussion?

The papers were discussed by Drs. Philip Smith, Winfield S. Farmer, Offenbach, and George S. Stevenson.

CHAIRMAN CHENEY.—If there is no further discussion, I will ask the readers of the papers to close.

Dr. Pratt isn't in the room, is he? (No response); Dr. Jefferson! (No response); Dr. Reeve!

DR. REEVE.—I have nothing to add.

CHAIRMAN CHENEY.—This closes the program for the afternoon.

The meeting adjourned at four-forty o'clock.

SECTION II—HALLUCINATION AND DRUG DELIRIUM.

THURSDAY AFTERNOON, JUNE 2, 1932.

The meeting convened at two-thirty o'clock, Dr. May presiding.

CHAIRMAN MAY.—The paper by Drs. David Slight and C. N. H. Long is on "Blood Lipoids in Mental Depression." Dr. Slight.

Dr. Slight presented the paper.

CHAIRMAN MAY.—This paper will be discussed by Dr. Gilbert J. Rich of Chicago.

The paper was discussed by Dr. Gilbert J. Rich and by Dr. David Slight.

CHAIRMAN MAY.—The next paper is entitled: "Psychiatry and Its Relationship to the Criminal Law," by Dr. William Nelson of St. Louis.

Dr. Nelson presented his paper.

CHAIRMAN MAY.—Dr. William F. Drewry, of Richmond, will discuss this paper.

The paper was discussed by Dr. William F. Drewry, Dr. J. J. Kindred and Dr. William Nelson.

CHAIRMAN MAY.—I will now call for the paper: "Experimental Analysis of the Psychopathological Effects of Intoxicating Drugs," by Dr. Lindemann and Dr. Malamud. Dr. Malamud is to read the paper.

Dr. Malamud presented this paper.

The paper was discussed by Dr. Harry Stack Sullivan, Dr. A. A. Brill and Dr. William Malamud.

CHAIRMAN MAY.—The next paper is: "Experiments on Imaginations, After-Images and Hallucinations," by Dr. Paul Schilder of New York.

Dr. Schilder presented his paper.

CHAIRMAN MAY.—This paper will be discussed by Dr. Abraham Myerson of Boston.

The paper was discussed by Dr. Abraham Myerson and by Dr. Schilder in closing.

CHAIRMAN MAY.—The last paper of the afternoon is on the subject of "Bromide Delirium." This is to be presented by Dr. Max Levin of Harrisburg.

Dr. Levin presented his paper.

CHAIRMAN MAY.—The paper is to be discussed by Dr. Emmet F. Hoctor of Farmington, Missouri.

The paper was discussed by Dr. Emmet F. Hoctor, Dr. Dan S. Renner and Dr. Alfred Gordon.

CHAIRMAN MAY.—Is there anything further? If not, the Section is adjourned.

The meeting adjourned at five-thirty o'clock.

FRIDAY MORNING SESSION.

JUNE 3, 1932.

The Joint Session of The American Psychiatric Association and the American Psychoanalytic Association convened at nine fifty-five o'clock, President Russell presiding.

PRESIDENT RUSSELL.—The meeting will please come to order.
There will be a report from the Council this morning.

SECRETARY CHENEY.—The Council met this morning and considered a report of the Committee on Standards and Policies, which was submitted last night. The Council voted to refer this report to the Executive Committee for further study and reference to the next meeting of the Council, which might be a special meeting called by the President.

Dr. Meyer for the Committee on Psychiatry in Medical Education reported progress in the interests of this committee, in view of the work of the Division on Psychiatric Education of the National Committee for Mental Hygiene and of other organizations working along similar lines.

No report has been received from the Committee on Relations with the Social Sciences.

The Council voted to elect Dr. Owen Copp, who is now in Europe, as a delegate to attend the Congress of Alienists to be held in Limoges, France, in July.

There was no further business.

PRESIDENT RUSSELL.—You have heard the report of the Council. What action will you take.

DR. HUTCHINGS.—I move it be received.

The motion was seconded, put to a vote and carried.

PRESIDENT RUSSELL.—This is a joint session with the American Psychoanalytic Association. Unfortunately, the President of that Association is unable to be here this morning or the Vice President. Dr. Richard H. Hutchings, of New York, has very kindly consented to serve as chairman.

Dr. Hutchings took the chair.

CHAIRMAN HUTCHINGS.—I am very sorry that Dr. Brill, the President of the Psychoanalytic Association, was obliged to leave hurriedly, having received a message calling him to New York. His paper was the first on the program today. But we have a paper from another session which was postponed to this meeting. The paper is by Dr. Bernard Glueck, "Hospital Experience With Psychoanalytic Therapy."

Dr. Glueck read a portion of his paper.

DR. ADOLF MEYER.—Mr. Chairman, may I make a motion that Dr. Glueck be given an extension of time in reading his paper, on account of its importance, both for The American Psychiatric Association and the Psychoanalytic group?

CHAIRMAN HUTCHINGS.—If there is no objection, that will be done. Doctor, will you complete your paper, then?

Dr. Glueck finished reading his paper.

CHAIRMAN HUTCHINGS.—We are under obligations to The American Psychiatric Association to complete our session within the limits usually imposed upon the session meetings, and we shall therefore have to limit the papers to twenty minutes and the discussion to as brief a period as possible, not to exceed three minutes.

The discussion on this paper was to be opened by Dr. Clark, of Providence, R. I. Is Dr. Clark present?

The paper was discussed by Dr. George E. Clark, Dr. Gregory Zilboorg and Dr. Adolf Meyer.

CHAIRMAN HUTCHINGS.—Is there any further discussion? If not, we will pass on to the next paper on the program, "The Body as an Unconscious Symbol," by Dr. Bertrand D. Lewin, of New York City.

Dr. Lewin presented his paper.

CHAIRMAN HUTCHINGS.—Dr. Lewin's paper is now open for discussion.

The paper was discussed by Dr. Thomas M. French, Dr. Ives Hendrick and by Dr. Lewin in closing.

CHAIRMAN HUTCHINGS.—The next paper is "The Psychology of Nudism," by Dr. Sandor Lorand of New York.

Dr. Lorand presented his paper.

CHAIRMAN HUTCHINGS.—The hour is getting late and if the discussion on this paper is not too prolonged, there will be time yet for Dr. Zilboorg's paper which we hope to hear. We are now ready for the discussion on the last paper.

If there is no discussion, then we will pass on to the last paper on the program by Dr. Gregory Zilboorg, "The Dynamics of Suicide."

Dr. Zilboorg presented his paper.

CHAIRMAN HUTCHINGS.—Is there any discussion on this paper of Dr. Zilboorg's? It is a very practical and useful paper. There seems to be none.

The American Psychoanalytic Association is extremely gratified at the large and attentive audience which is assembled here this morning to attend its session, and we will now turn the meeting back to the President of The American Psychiatric Association with our thanks.

President Russell took the chair.

PRESIDENT RUSSELL.—The order of business of The American Psychiatric Association will now be continued.

We will call on the Committee on Resolutions for its report; Dr. Abbot, Chairman, will present it.

Dr. Abbot read the report of the Committee on Resolutions.

PRESIDENT RUSSELL.—The report of the Committee on Resolutions is before you for action. If anybody wishes to discuss any of the recommendations in the resolutions, it will be quite in order.

DR. BRUSH.—I move the report be adopted and the recommendations contained in the report be accepted and made part of the proceedings of the convention.

The motion was seconded, put to a vote and carried.

PRESIDENT RUSSELL.—The time has now come for the close of the session and of this annual meeting. The Constitution says that at the close of the meeting, the President-elect will assume the duties of President. Before he proceeds to do this, I would like to take the opportunity to again thank the Association for the honor and privilege which I have had in presiding over the deliberations of the meeting and of occupying the position of President during the past year. I would not want to leave the position without expressing my very great obligations to the other officers of the Association and to the various committees, without whose services the administration of the past year and the meeting would not have been as successful as they have been.

I would like especially to praise the Program Committee which has, after a great deal of work, one can scarcely realize its extent, produced the splendid program which we have had this year.

The Committee on Arrangements—I don't think I can voice the feelings of the Association as well as was said by the Resolutions Committee, thanking them for making our stay here so pleasant and perfecting their arrangements in such a way that all has gone so smoothly and successfully.

For the installation of the President, I would ask Dr. Kline if he will not escort the President-elect to the platform and present him to the Association for his installation in office.

Dr. Kline escorted Dr. May to the platform.

DR. KLINE.—*Dr. Russell and Members of the Association:* It is a privilege and a real pleasure to present Dr. James V. May, of Boston, Mass., for induction into the office of President. Dr. May brings a wealth of experience to the position. Born in Kansas, a graduate of its State University, a graduate of the Medical Department of the University of Pennsylvania, he saw service with the Federal Government in the Philippines and was an officer in the late war. He is known to the state hospital systems of New York and Massachusetts—in New York having served as Medical Superintendent of a State Hospital, later being elevated to the position of Commissioner of the New York State Hospital Commission. For the last twenty years his work has been in Massachusetts—an able administrator and eminent psychiatrist at the head of the Boston State Hospital. He has written much. I dare say all of you are familiar with his book, " Mental Diseases," almost a text book, in which the subject is approached from a public health standpoint. I am sure that Dr. May, as President, will conduct the affairs of the Association with traditional excellence.

PRESIDENT RUSSELL.—Dr. May, as retiring President of the Association, and also as an old friend and as one who can testify from a great deal of personal knowledge as to the eminent qualifications which you possess for the high position to which you have been called, I beg to hand you with my congratulations this gavel in token of your installation as President.

Dr. May took the chair.

PRESIDENT MAY.—Before undertaking to assume the duties and responsibilities of this important office, I would like to take advantage of this opportunity to express my appreciation of the signal honor which has been conferred upon me. That I should have been called upon, for the time being, to preside over the destinies of this great organization at a session held in Philadelphia is to me particularly gratifying. It was here that I received my degree in medicine at the University of Pennsylvania just thirty-five years ago. In this city I served a general hospital internship. Within the historic walls of the old Blockley Hospital I had my first practical experience in clinical psychiatry. To maintain the high standards of efficiency which have consistently characterized the activities of The American Psychiatric Association since 1844 will indeed be a very difficult task. Your co-operation, your support, your advice will be highly appreciated.

In conclusion, I can only give you my assurance that I will make every effort to merit the confidence which you have reposed on me at this time. I thank you all. My attention has been called to the fact that my first and only official duty today is to declare this eighty-eighth annual session of the Association formally closed.

The meeting adjourned at twelve forty-five o'clock.

During the meeting 637 members and guests registered.

CLARENCE O. CHENEY,
Secretary-Treasurer.

REPORTS OF COMMITTEES.

The following reports of committees and of the Secretary-Treasurer were presented to the Council and approved by it and by the Association during the convention session in Philadelphia May 30–June 3, 1932.

Report of the Executive Committee.

In June, 1931, the Executive Committee, voting by mail, approved of the designation of Drs. Richard Dewey and Edward M. Brush as Editors Emeriti of The American Journal of Psychiatry.

In September, Dr. Russell, Dr. Sandy and Dr. Cheney with a group of the Philadelphia members of the Association met in Philadelphia and inspected various hotels and after consultation with the members of the Committee on Arrangements, the members of the Executive Committee voted to select the Bellevue-Stratford Hotel for the next annual meeting, the dates fixed being May 30–June 3.

On December 30, 1931, the Executive Committee met at the Hotel Commodore in New York City, the chairmen of the various Association committees having been requested to meet, if possible, with the committee. Those present were Drs. Russell, May, Sandy and Cheney of the Executive Committee; Drs. Bond and Robertson of the Council and the following committee chairmen: Dr. Sullivan, Relations with Social Sciences; Dr. Kline, Legal Aspects of Psychiatry; Dr. Barrett, Ethics; Dr. Bond, Revision of Constitution; Dr. Potter, Psychiatric Social Service; Dr. Whitehorn, Research; Dr. Hamilton, Program; Dr. Fuller, Nursing.

There were also present during the meeting Dr. Klopp, Dr. Chapman, Dr. Lowrey and Dr. Hutchings.

The Committee on Nursing was authorized to make further inquiries into the possibilities of obtaining funds for a survey of nursing in mental hospitals and to report back to the Executive Committee and the Council.

The Committee on Ethics indicated that no matters had been brought before the committee requiring attention.

The Committee on Legal Aspects of Psychiatry reported that it wished to continue to cooperate with the American Bar Association and the American Medical Association and that a joint meeting was contemplated but not yet definitely decided upon.

The Committee on Program reported that an extensive program was in progress including sessions devoted to special topics requiring parallel sessions for several of the meetings. The possibility of having printed in advance, the papers to be read at the meeting, was discussed and a decision was deferred for further consideration of the cost and feasibility.

The Committee on Relations with Social Sciences indicated its interest in the possibility of a survey by psychiatrists and social scientists of the cultural situation in relation to schizophrenia. It was then voted by the Executive Committee that the Committee on Relations with Social Sciences be asked to formulate a plan for a survey as indicated and report if possible at the next meeting.

The Committee on Psychiatric Social Service outlined a suggested plan of work of the committee with particular reference to the relationship and the work of the psychiatrist and the social worker and this plan was approved by the Executive Committee.

For the Research Committee, the inclusion of clinical research in their activities was discussed and it was recommended by the Executive Committee that it seemed that clinical research was quite a proper field for the activities of the committee in addition to laboratory research.

Dr. Russell reported that the National Research Council had approved of inviting The American Psychiatric Association to recommend a member for membership in the Division of Medical Science of that Council and that Dr. Whitehorn had been nominated for such membership. Dr. Whitehorn was appointed in January, 1932, for the period ending June 30, 1934, as representative of The American Psychiatric Association.

For the Committee on Statistics it was reported that the official American Psychiatric Association classification had been accepted for inclusion in the classification of the Committee on Nomenclature in Diseases. Dr. May indicated that the Foundation previously financing the work of this latter committee had withdrawn its support and the question was brought up of financing the work for the current year. It was pointed out that other Associations had indicated their willingness to contribute and the Secretary of the Committee on Nomenclature had been authorized to ask for contributions from the participating organizations. It was voted to defer action on this matter until the Association was asked for a contribution.

Dr. May reported that the Province of Quebec hospitals had indicated an interest in our Association classification but had made changes in the final classification promulgated by them.

The Committee on Medical Services discussed the question of including a discussion of the aspects of mental deficiency in its report and this was approved by the Executive Committee.

The Secretary expressed the wish to be instructed regarding the depositories for Association funds and it was voted by the Executive Committee that the Bowery Savings Bank, the Emigrant Industrial Savings Bank, the Seaman's Bank for Savings and the Greenwich Savings Bank be selected as depositories and that the Secretary-Treasurer should remove the funds from the Poughkeepsie depositories to the above mentioned banks. It was found, however, that the Seaman's Bank for Savings declined to accept accounts over $300 and that the Greenwich Savings Bank declined to accept the account without a signed resolution passed at a meeting of the Board. It was later voted by the committee, therefore, that instead of these two banks the Treasurer

should deposit part of the funds in the Bank for Savings and the Union Dime Savings Bank. The directions of the Executive Committee were carried out by the Secretary-Treasurer.

At the afternoon meeting the matter of the survey of mental hospitals by the American Medical Association and of sending delegates from our Association to meet with the Council on Medical Education and Hospitals of the A. M. A. in Chicago, were brought up for discussion by Dr. Russell. Discussion was had not only by the members of the Executive Committee but also by Drs. Bond, Kline, Klopp, Barrett and Hutchings. As a result of this discussion it was voted to withhold official cooperation and participation with the A. M. A. in their surveys of hospitals until they are officially requested to do so and then on terms that The American Psychiatric Association might set as participants. It was voted also not to send official delegates from the Association to the meeting of the A. M. A. in Chicago.

It was voted to send a delegate of the Association to attend a joint meeting of the Council on Medical Education and Hospitals and the Federation of State Boards to be held in Chicago in February to discuss the qualifications of specialists in psychiatry. Dr. Adolf Meyer was designated by the President as a delegate but was unable to attend the meeting.

The committee voted by mail to request the National Board of Medical Examiners to include a representative of The American Psychiatric Association on the board. The President did this. The President was later notified that definite action on this would be deferred until the National Board annual meeting held in May.

Dr. Russell brought up for discussion the question of having a business manager or Executive Secretary for the Association to have a permanent office, preferably in New York City, possibly in connection with the offices of the National Committee for Mental Hygiene. This matter was left open for further consideration and discussion at a subsequent meeting of the Council.

A meeting of the Executive Committee was held in the office of the National Committee for Mental Hygiene on April 9, 1932. Those present were Drs. Russell, May, Ripley and Cheney of the Executive Committee, Dr. Adolf Meyer, Past President and Dr. Arthur P. Noyes of the Committee on Standards and Policies.

Regarding the survey of mental hospitals by the American Medical Association, in view of the expressed interest in this matter by members of the Association and in view also of a discussion which had been held by the President and Secretary and the Secretary of the Council on Medical Education and Hospitals of the A. M. A. it was decided to adhere to the decision made at a previous meeting of the Executive Committee, namely, not to officially participate in this survey by the A. M. A.

Dr. Noyes presented a discussion and outline of a survey of hospitals to be carried out by the Association and the National Committee for Mental Hygiene, the plans necessitating the partial financing, at least, by the National Committee for Mental Hygiene. It was understood that the National

Committee for Mental Hygiene was not at the present time able to finance such survey. The matter was left open for further consideration.

There was also a discussion of the question of establishing an office for the Association in the offices of the National Committee for Mental Hygiene. Again it was decided to defer any final decision for further consideration and discussion by the Council.

The advisability of affording the Nominating Committee more time for the nomination of officers was discussed and it was agreed that it would seem advisable for the President to inform the members of the Association whom he expected to appoint at the meeting as Nominating Committee so that they might have an opportunity to give careful consideration to the nominations.

The Secretary read a letter from Dr. Logie, Secretary of the Committee on Nomenclature of Diseases, asking that the Association approve of the classification of mental diseases as accepted by that committee and also asking for a contribution of $250 to finance the continuation of the work of the committee. Inasmuch as the final classification had not been received, it was voted to defer until the meeting in June, final action on the classification and also action on the matter of contribution for continuation of the work.

The Executive Committee voted to approve of authorization of not more than $500 to the Committee on Arrangements to defray the expenses of the Philadelphia meeting if it developed that this money from the Association was necessary.

Respectfully submitted,

WILLIAM L. RUSSELL, *Chairman,*
The Executive Committee.

REPORT OF SECRETARY, 1931-32.

The following is a statement of membership of The American Psychiatric Association as of May 25, 1932:

HONORARY MEMBERS.

Former and present number	12

LIFE MEMBERS.

Former number	55	
Fellows to Life Members	6	
Total		61
Died		5
Present number		56

CORRESPONDING MEMBERS.

Former and present number	4

FELLOWS.

Former number		897
Elected		16
Members to Fellows		23
Total		936
Fellows to Life Members		6
Resigned		3
Dropped		15
Died		12
Total		36
Present number		900

MEMBERS.

Former number		382
Elected		62
Reinstated		1
Total		445
Members to Fellows		23
Resigned		1
Dropped		13
Died		5
Total		42
Present number		403

TOTAL MEMBERSHAP.

Honorary		12
Life Members		56
Corresponding members		4
Fellows		900
Members		403
Total membership May 25, 1932		1375
Total membership May 15, 1931		1356

Treasurer's Report, 1931-1932.

RECEIPTS.

Balance on hand May 15, 1931	$22,888.29
Dues and Membership lists	11,081.89
Receipts from sale of "Institutional Care of the Insane"	19.58
Receipts, sale of Proceedings of Colloquium, Social Sciences Committee	70.72
Interest	924.84
Total receipts	$34,985.32

DISBURSEMENTS.

Expenses, Toronto meeting	$504.45
American Journal of Psychiatry (6 numbers)	5,426.84
Clerical services	600.00
Printing programs, membership lists, stationery and postage	1,245.15
Committee expenses	429.99
Miscellaneous	293.17
Total disbursements	$8,499.60
Balance on hand May 25, 1932	$26,485.72

Balance deposited as follows:

New York Committee on Arrangements, The Bank for Savings	$2,425.58
Special interest account, Union Dime Savings Bank	5,568.78
Special interest account, Emigrant Industrial Savings Bank	7,561.97
Special interest account, The Bowery Savings Bank	7,562.71
General account, Corn Exchange Bank Trust Company	3,366.68
Total Balance	$26,485.72
Gain over May 15, 1931	3,597.43

Report of the Committee on Medical Services.

The Committee on Medical Services re-affirms belief in the importance of the quality of the medical staff in largely determining the efficiency of a mental hospital. In past reports of this and other committees, certain standards for mental hospitals have been promulgated, many of which have been generally adopted. One would expect for instance a general acceptance of the requirement that there should be a qualified medical superintendent in charge, and a sufficient assistant medical staff, yet from time to time, there is found a surprising lack of appreciation of such established principles of mental hospital administration. Occasionally, even, an attempt is made, usually through actual or threatened political interference, to bring about

lay administration of mental hospitals, or a system of divided authority with separate medical and business heads. The committee believes that the Association should vigorously support local authorities in combating any such destructive tendencies.

But there are certain other aspects of medical service organization and activities which also merit further consideration. For instance, there does not yet appear to be sufficient appreciation of the need for a clinical director and many hospitals are still without such an important officer. The superintendent of a large hospital with his broad responsibilities cannot as a rule give continued attention to the details of the medical services. He must here, as in other departments of hospital administration, delegate his authority to some one upon whom he may depend to supervise the application of progressive policies and the thorough routine diagnostic and treatment activities. A qualified clinical director, in conducting staff meetings, in supervising the examination and treatment of patients, in establishing and keeping up a thorough case record system, in conducting research projects and stimulating such activities in other staff members, in directing the training of new staff members and other personnel, and in coordinating all of the medical activities both within the hospital and in the community tends to raise the general average of the medical work in any hospital.

Many hospitals have visiting or so-called consultant staffs consisting usually of representative community medical men, surgeons, internists, specialists in various fields including ophthalmology, neurology, roentgenology and so on. The visiting staff is frequently such in name only, or is occasionally called upon in unusually obscure cases in the capacity of consultants or as surgeons, to perform major operations with the assistance of the resident staff. The committee believes that the general medical work of the hospitals would be stimulated by frequent and regular calls by a well-selected visiting staff, in addition to the emergency calls usually made. The active association of recognized specialists from the community would also afford an opportunity for those members of the hospital staff who are interested and qualified to develop ability in special fields under competent direction.

The committee again recommends serious attention to the desirable trend mentioned in other reports, towards the concentration of general diagnostic and treatment facilities in special hospital buildings. Such buildings equipped completely as general hospitals, with the exception of obstetrics and pediatrics, will insure better medical and surgical treatment of patients, provide an adequate center for the care of sick employees and in general make it more likely that the mental hospitals having such facilities, will be approved for general interneship.

Out-patient clinics may not be neglected if a mental hospital is to be fully functioning from a medical service standpoint. Mental clinics are the outposts in the campaign for prevention; the increasing demand for such service indicates the general public's realization of the importance of mental hygiene and its growing acceptance by the medical profession; and participation in community activities results in stimulating the hospital staff with decided

benefit to the patients. The committee urges more rapid extension of such facilities and participation by all mental hospital staffs.

Nurses and attendants in mental hospitals constitute extremely important elements in the medical services. These employees come into constant and intimate association with the patients and they must be depended upon largely to carry out the physicians' efforts in treatment and general rehabilitation. The need for the organized training of nurses in mental hospitals and the desirability of having accredited schools for nurses have long been recognized. The Committee on Medical Services wishes to join with the Committee on Nursing in their progressive recommendations in the field of mental hospital nursing. In addition, the committee also takes this opportunity for emphasizing the need for well established and routine methods of training attendants, so often neglected in this respect. A few schools for licensed attendants have demonstrated beyond question their value, especially where it is deemed impossible to conduct an accredited school of nursing.

Schools for mental defectives constituting a part of The American Psychiatric Association have some of the same problems met with in mental hospitals. This is especially true in respect to the employees of the attendant class caring for the patients. It is remarkable and disconcerting that with possibly one or two exceptions there is an almost universal absence of training courses for attendants. When one realizes the prevalence of mental deficiency, the need for vigorously meeting the problem, and the more hopeful aspects of the whole question especially from a training aspect, it is surprising that the subject receives so little attention in medical schools and that organized efforts in training institutional personnel are almost entirely neglected.

In conclusion, the committee is impressed with the need for a still more general acceptance of the necessity for qualified medical staffs; for organized medical leadership in mental hospital and community activities; for concentration of general medical and surgical facilities in special hospital buildings; and for training of personnel especially in schools for mental defectives.

WILLIAM C. SANDY, M. D., *Chairman,*
MORTIMER W. RAYNOR, M. D.,
EDWARD A. STRECKER, M. D.,
LLOYD J. THOMPSON, M. D.,
ARTHUR G. LANE, M. D.,
G. KIRBY COLLIER, M. D.,
ISAAC J. FURMAN, M. D.,
RANSOM A. GREENE, M. D.,
FREDERICK W. PARSONS, M. D.,
KARL M. BOWMAN, M. D.,
Committee on Medical Services.

Report of the Committee on Statistics.

To the American Psychiatric Association:

Three years ago there was referred to your Committee on Statistics the matter of cooperating with the National Conference on Nomenclature of Disease in the latter's effort to work out an improved system of classification of diseases. The chairman of your committee and Dr. William T. Shanahan were appointed official representatives of this Association in the National Conference. As reported last year, agreement was reached whereby the official classification of mental diseases of this Association was incorporated in the general scheme of classification of the National Conference. Likewise, agreement was reached on a revised classification of convulsive disorders.

The work of the National Conference has reached the point where a preliminary volume has been printed in a limited edition, under the auspices of the Commonwealth Fund. It is expected that the final revision will be published next January, and will then be generally available.

The new nomenclature is based on common clinical usage. It does not introduce new or strange terms, but more accurate selection and systematic arrangement of the terms now used in good medical practice. The arrangement of these names is based, in the first place, on the system, organ or part affected, as for example, the digestive system, subdivided into its parts, as the mouth, the stomach, and so forth, each of these parts being still further subdivided into lips, tongue, etc., and cardiac region, pyloric region, etc., respectively.

In the second place, under each of these topographical groupings, the diseases are classified by causes, as for example, those due to parasites, to intoxication, to trauma, etc.; under each of twelve such general groups they are arranged in subdivisions, such as bacteria, protozoa, etc., metals, vegetable poisons, etc., fractures, burns, etc. Finally, under each of these subdivisions are given the names of the particular bacteria or protozoa, etc., the particular metals or vegetable poisons, etc., the particular type or cause of fracture, burn, etc.

This nomenclature is capable of minute and accurate codification by numbers, much as are books in a large library, under the Dewey system.

Your Committee on Statistics would remind the Association that this very comprehensive work is part of an international movement, under the auspices of the League of Nations. It will be of great significance in the field of medicine generally, as well as in the various specialties. It is expected that the new nomenclature will replace the International List of Diseases now in use, and will be generally used in statistical reporting of mortality and morbidity by health departments and census bureaus.

The advantages of the new system are very great, and your Committee on Statistics strongly recommends that when it becomes available the members of this Association, and especially those connected with hospitals, study it with a view to adopting it for recording physical diseases as well as the psychoses. It incorporates the terminology of mental diseases which this

Association has advocated and used for many years, though the psychoses are arranged in a different order, to conform to that of the general system used throughout the new nomenclature.

Since many special national medical associations have approved the nomenclatures dealing with their specialties, your committee recommends that formal approval of the Conference classification of mental diseases and convulsive disorders be sent to the National Conference by this Association.

As the introduction of the revised classification of physical diseases will require more funds than the National Conference now has available, it is recommended that an appropriation be made by this Association to assist in defraying such expenses.

Your committee is pleased to note the progress being made in the classification of mental diseases and in statistical procedure in several countries. During the past year the official Statistical Manual prepared by the National Committee for Mental Hygiene in cooperation with your committee was translated into French and made the official statistical guide for the hospitals for mental disease in the Province of Quebec. As other provinces of Canada have adopted our classification and statistical system, the Canadian statistics of mental disease will soon be comparable with those of the United States.

Very recently Dr. A. A. Moll of the Pan-American Union, Washington, has requested permission of the National Committee for Mental Hygiene to translate the Statistical Manual into Spanish and to publish it in countries of the Union. Such permission was granted with the stipulation that proper credit be given to the National Committee and the American Psychiatric Association.

In this connection it should be noted that the German Psychiatric Association has recently adopted a new classification of mental diseases which is similar to ours, and that a Committee of the Royal Medico Psychological Association of Great Britain has worked on the problem of revising the nomenclature of mental diseases in use in that country. It seems probable that within a few years general agreement in the classification of mental diseases in all civilized countries may be reached. This end will be furthered by the International Committee on Mental Hygiene which has recently appointed a committee on statistics. Such committee will be closely affiliated with the like committee of this Association.

In view of the increasing introduction of mental, or psychiatric, or psychopathic, or otherwise named wards or departments in general hospitals, and of out-patient clinics under these or various other names and either independently or in connection with general or special hospitals, your committee wishes to call attention to the great desirability of having a uniform statistical system for reporting the cases treated in such wards or clinics. Several superintendents of general hospitals have expressed a need for better reporting of such cases, and for record cards for such purpose. This Association might well cooperate with other organizations in forming a group to consider carefully the devising of such a system.

In view of the enactment by Congress last year of a law authorizing the annual collection of statistics of institutions by the Federal Census Bureau and the continued cooperation of such Bureau with this Association, the National Committee for Mental Hygiene has discontinued the collection of statistics from state hospitals and other institutions. It is gratifying to learn, however, that the National Committee is planning to continue to publish and distribute as heretofore the Manual and the statistical cards. It seems appropriate therefore at this time to acknowledge the large indebtedness of this Association to the National Committee for its persistent and effective work in promoting the adoption by state hospitals of the Association's classification and statistical system.

Your committee regrets to report that, in spite of repeated protests, the American Medical Association in its statistical reports still groups, in one class, hospitals for mental disease, schools for mental defectives and institutions for epileptics, using to include all of these, the objectionable term "Hospitals for nervous and mental diseases." As such Association is now engaged in a special survey of hospitals for mental disease it seems imperative that it should adopt a more scientific attitude in collecting and reporting information concerning these various groups of institutions.

Your committee would urge upon each superintendent the desirability of writing to the Editor of the Directory of the American Medical Association requesting that his institution be classified, not under the heading of "Hospitals for nervous and mental diseases," but under the class to which his institution belongs.

In closing this report your committee wishes to call attention to the appearance during the past year of several noteworthy statistical research studies in the field of mental diseases. These studies were made possible by the accumulation during a term of years of systematic data by means of a uniform statistical system. The promise, therefore, made in 1917 that a uniform classification and statistical system would make available valuable information concerning the mental disease problem and would promote scientific research is being fulfilled.

Respectfully submitted,

JAMES V. MAY, *Chairman,*
Committee on Statistics.

REPORT OF COMMITTEE ON NURSING.

Of the schools of nursing which have been accredited by the Association since 1922 four have been discontinued, two are giving courses for affiliates and post-graduates only, and two are giving only two-year courses for nurses not qualified for registration, having abandoned the regular three-year course.

These may be tabulated as follows:

In public hospitals for mental diseases in the United States		55
In public hospitals for mental diseases in Canada		11
In private hospitals		9
In schools for the feeble-minded		2
In hospitals for epileptics		1
Total		78
Schools discontinued	3	
Schools discontinuing the three-year-course and giving two years' substitute course	2	
Schools discontinuing the three-year-course and taking affiliating and post-graduate students only	3	8
Active schools now in operation giving the three-years' course		70

Questionnaires were received at the time of writing the report, from the following accredited schools of nursing:

From schools in public hospitals in the United States	45
From schools in public hospitals in Canada	7
From schools in institutions for the feeble-minded	2
From schools in institutions for epileptics	1
From schools in private institutions	7

Study is first made of the 45 schools in public hospitals for mental diseases in the United States:

One reports no pupils entering in 1931.

Four report entering classes of 9 or less.

Forty report entering classes of 10 or more.

Eleven of the last group report over 30.

The total number of graduates was 304.

Two schools report no graduates.

Twenty-one report 5 or less.

Fifteen report from 6 to 10.

Two report 20 and 28, respectively.

The seven Canadian schools report entering classes varying from 20 to 71. Graduating classes varying from 5 to 20.

Twenty-four schools require 4 years high school preliminary education, eleven require 3 years, two require 2 years, and eight require 1 year.

The Canadian schools have a two-year requirement for all.

Many schools with a lower requirement are getting high school graduates among their applicants.

Eighteen of these 45 schools are offering affiliated courses to pupils in general hospital schools. These courses are three months in length and were given to 606 pupils. The numbers varied from 2 to 91 for the year, in different schools.

Eight schools offered post-graduate courses. Four of these offering a three months' course, report no students. The remaining four giving a six months' course had 4, 11, 12 and 15 students, respectively.

Eighteen schools report inquiries for either affiliated or post-graduate instruction, showing clearly the increasing demand for a practical knowledge of psychiatric nursing, and a recognition of its importance in the curricula of general hospital schools. Your committee feels that this need should be met by the schools in our mental hospitals, where the principles and the practice of psychiatric nursing can best be taught by class-room work and ward experience. Carefully planned courses should be offered and as thorough and varied experience permitted as the brief period allows. It is the belief of your committee that a four months' course for affiliates from general hospitals is more desirable.

Four schools in the larger private hospitals are taking affiliates from general hospitals for a three months' course and three are offering post-graduate courses.

Thirty-two of these 45 schools give instruction to attendants. The courses vary from four weeks to eighteen months, the majority falling between 13 to 30 weeks. This practice is commendable and is an effectual means of raising the standards of service among this relatively large and most important group, on whom is still placed so much responsibility.

All of these public hospitals report graduate registered nurses on the women's wards, in varying numbers. Thirty-two have placed graduate registered women nurses on men's wards, and twenty-four have graduate registered men nurses on the men's wards. The larger employment of registered nurses both men and women, as charge nurses, is strongly recommended.

The fact that 31 of these 45 schools, and 3 of the 7 Canadian schools report 100 per cent of their graduates successful in registration, and 12 others, including three more in Canada, report over 90 per cent successful, is evidence of the satisfactory results of the teaching in our schools.

Nine superintendents report an estimate of from 50 per cent to 90 per cent of graduates who enter private nursing. Sixteen report that none, or a very small per cent, enter private work, and fifteen report from 5 per cent to 40 per cent entering this field. Considering the fact that a large number abandon the nursing field for various reasons, it seems evident that the number of gradutaes who remain in hospital service is insufficient to fill the need, which is steadily increasing, as our standards of nursing care advance.

There is a wide variation in money allowance to students in training. The minimum reported in public hospitals was $12.50 and the maximum $59 for the first year, from 0 to $66 in the second year, and from 0 to $66 in the third year. During the period of affiliation the home school usually pays nothing and the student accepts the schedule of the affiliated hospital. The fact that some schools send their pupils to the general hospital in the

second year, and others in the third year, will help to explain the above figures.

Nurses' homes, used exclusively by nurses, are furnished by 50 per cent of the public hospitals reporting. Forty per cent offer a single room for each nurse and student, while in several others there are but a few double rooms used mainly by student nurses. Forty-six per cent have dining rooms for the exclusive use of nurses. It is gratifying to know that so many of our schools have such adequate and attractive living conditions and that others are prepared to follow as soon as conditions will permit.

Twenty-seven report all school exercises given on hospital time, fourteen on part hospital and part off-duty time, and four on off-duty time entirely. The Canadian schools give all school exercises on hospital time.

The matter of a field worker discussed in previous reports has received much attention. With the sanction of the Executive Committee, efforts have been made to obtain the funds necessary to finance the proposed plan. We have had the hearty sympathy and co-operation of the Committee on Psychiatric Education of the National Committee on Mental Hygiene. Because of the unusual economic conditions now prevailing, there seems to be no possibility of accomplishing our object this year. It is still the opinion of your committee, however, that such a survey should be made and that it would yield basic facts for future plans and recommendations, obtainable in no other way.

Following the instruction of the Association in 1928 that representation in the Committee on the Grading of Nursing Schools should be sought, a direct request for such representation was placed in the hands of the Chairman of that committee in February, 1932. Action on this was expected at their next meeting in March, but at this writing no reply has been received.

Your committee has held two meetings during the year. The Chairman has attended a conference called by the National Committee on Mental Hygiene to consider the importance of mental hygiene in the education of nurses, and later a meeting of a special committee to consider how mental hygiene can best be introduced into the curricula of all schools of nursing. The interest in this matter is quite keen among nursing educators, and it was the general opinion that mental hygiene should permeate all nursing education rather than be confined to a separate course in the schedule. With this viewpoint your committee agrees.

The following schools of nursing have applied for the approval of the Association. The committee has carefully examined their qualifications, which are well above the established minimum requirements, and recommends that they be placed on the list accredited by the Association:

The Cleveland State Hospital School of Nursing, Cleveland, Ohio.

The Alton State Hospital School of Nursing, Alton, Illinois.

DANIEL H. FULLER, *Chairman,*
Committee on Nursing.

Report of Committee on the Legal Aspects of Psychiatry.

The seventh report of the Committee on the Legal Aspects of Psychiatry is herewith respectfully presented.

The past year has witnessed no startling or spectacular sorties, no sweeping advance; it has, however, seen a consolidation of positions, a strengthening of the ramparts, and a continuance of the barrage which for several years past has been laid down in the camp of those who scoff at the thought of applying science to the law. In other words abandoning metaphor, progress is being made steadily, if perhaps not too rapidly, in the task of building up a rapport between law and psychiatry.

The cooperation began so auspiciously in 1927 between this committee and the Committee on Psychiatric Jurisprudence of the American Bar Association has continued most encouragingly, and has been strengthened by the assistance of the like named Committee of the American Medical Association, appointed in 1929. An active liaison among these committees has been carried on by correspondence during the year, and will be supplemented in the near future by a joint meeting. Your committee has prepared a bibliography and a group of illustrative cases at the request of the Bar Association Committee for their use in calling the more forcibly to the attention of lawyers throughout the country the practical value of psychiatry to the administration of law, particularly criminal law.

In various localities, the legal fraternity is exhibiting an interest in psychiatry; in several instances recently this interest has taken tangible form in the organization of psychiatric clinics in the criminal courts. We are glad to report that at last the clinic in the Court of General Sessions of New York City, which has been projected for several years has finally been organized and is now functioning. The establishment of this clinic in what is probably the busiest court of superior criminal jurisdiction in the country should furnish a marked impetus to the movement for the further use of psychiatry as an aid to the disposition of criminal cases.

A recent notorious case in Michigan in which a mentally defective parolee committed murder served some newspapers as a text for editorials on the desirability of scientific study of criminals and the permanent restraint of the mentally unfit. On the other hand, two recent murder cases in which conflicting psychiatric testimony was given on what appeared to the general public to be a most flimsy basis have done measurable damage to the confidence in psychiatrists which was slowly being regained.

Very few legislatures have been in session this year, and no interesting legislation, proposed or enacted, has been called to the attention of the committee. One court decision of interest (Sinclair *vs.* State, 132 So. Rep. 581) declared unconstitutional a Mississippi law (Ch. 75, Laws of 1928) which prohibited the defense of insanity in murder cases. The law was a cumbersome and poorly conceived attempt to remedy a situation which could have ben cared for more simply and at the same time constitutionally, and is well off the books.

The Chairman takes pleasure in expressing once again his appreciation of the sympathetic and cordial spirit of the committees of the American Bar and Medical Associations. The combined efforts of three national associations, truly representative of the great professions of law and medicine, cannot fail to bear fruit in a closer relationship and understanding. To his fellow members of the committee he likewise tenders his thanks for their helpful assistance in the work of the committee.

GEORGE M. KLINE, *Chairman*,
WILLIAM A. WHITE, *Vice-Chairman*,
HERMAN M. ADLER,
L. VERNON BRIGGS,
BERNARD GLUECK,
WILLIAM HEALY,
R. F. C. KIEB,
KARL A. MENNINGER,
JOSEPH W. MOORE,
WINFRED OVERHOLSER.

REPORT OF THE COMMITTEE ON ACTIVITIES OF THE NEUROPSYCHIATRIC DIVISION OF THE U. S. VETERANS' BUREAU.

Many of the complex changes in the general situation of the U. S. Veterans' Bureau have no direct bearing upon its neuropsychiatric activities, but there are some direct and many indirect implications and it appears well at this time to offer a brief review.

For a period following the termination of the World War, veterans suffering from service-connected disabilities were cared for in hospitals operated by the Army, Navy and U. S. Public Health Service, and in certain civil institutions known as "contract" hospitals. Some services were paid for by the army, some by the navy and some by the Public Health Service. In order to centralize and better meet the increasing responsibilities, an independent agency was formed known as the U. S. Veterans' Bureau. A program of hospital construction was developed and, by 1924, the Veterans' Bureau had provided sufficient facilities for all service-connected cases, and in addition a small number of vacant beds for patients of the psychiatric tuberculous and the general medical and surgical groups.

About this time the difficulty of determining "service-connection" for disabilities presented many practical problems and it was decided to extend the period of "presumption of service-connection" to January 1, 1925, for neuropsychiatric disease, spinal meningitis, active tuberculosis, paralysis agitans, lethargic encephalitis and amœbic dysentery, such presumption to be conclusive in cases of active tuberculosis and spinal meningitis but in all other cases rebuttable by clear and convincing evidence. Furthermore, by a special act of Congress in June, 1924, free hospitalization was authorized for all veterans and for all diseases and conditions regardless of "service-origin," in so far as existing government facilities permitted. This legislation took the

form of an amendment to Section 202(10) of the World War Veterans' Act. Cases accepted as having no connection with service are now commonly referred to as "202(10)" cases.

The 71st Congress, on July 3, 1930, authorized the President to consolidate and coordinate governmental agencies affecting war veterans into an establishment to be known as the Veterans' Administration. Through this authorization, on July 21, 1930, the President issued an Executive order authorizing the consolidation of the U. S. Veterans' Bureau, the National Homes for Disabled Soldiers and the Bureau of Pensions. The then Director of the Veterans' Bureau was appointed and confirmed as the Administrator of Veterans' Affairs. These agencies continued to operate as bureaus of the Veterans' Administration until July 1, 1931, when a new plan of organization became effective which redistributed the several functional activities of the three then existing agencies to the end that related activities were set up under a common jurisdiction. Under this plan of organization, there are five major units, namely (a) office of the administrator; (b) office of the assistant administrator in charge of medical and domiciliary care, construction and supplies; (c) office of the assistant administrator in charge of pensions and compensation; (d) office of the assistant administrator in charge of finance and insurance; and (e) office of the special counsel on insurance claims. The former Veterans' Hospitals are now known as Veterans' Administration Hospitals, the former National Homes for Disabled Soldiers as Veterans' Administration homes, and the hospitals a part of these Homes as Veterans' Administration Home Hospitals.

The office of the assistant administrator in charge of medical and domiciliary care, construction and supplies consists of the following services: (a) Medical and hospital service, (b) national home service, (c) construction service and (d) service of subsistence and supplies. The plan provides that the medical and hospital services shall be under the control and direction of a medical director, who is responsible to the assistant administrator for all matters pertaining to the medical, including dental care, treatment, hospitalization, physical examination, and out-door relief of beneficiaries and claimants.

The central office of the Veterans' Administration is located at Washington, D. C. The Veterans' Administration maintains regional offices at 54 locations throughout the United States, two in each of the states of New York, Pennsylvania, Ohio, Missouri, California and Texas; one in the District of Columbia; and one in each of the other states except Delaware. These offices are responsible for the preparation and adjudication of claims for compensation and disability allowance; the physical examination of all veterans of all wars applying for benefits; provision of medical, surgical and dental treatment, aftercare, nursing, follow up, and social service, and the furnishing of orthopedic and prosthetic appliances; certification as to the legality of appointment and fitness of fiduciaries as well as other matters affecting beneficiaries under legal disabilities; and the handling of insurance activities and matters pertaining to loans on adjusted-service certificates. They also assist in the preparation of claims for pensions, and in the admission of beneficiaries to Veterans' Administration homes.

On June 30, 1931, the regional office facilities of 11 states had been consolidated with hospitals and soldiers' homes. It is proposed to provide these joint facilities at a number of the new hospitals to be erected. The practice permits beneficiaries to obtain medical care and treatment at the point where application is made for all other benefits.

On June 30, 1931, there were 299,288 veterans receiving disability compensation—19,749 more than on June 30, 1930. The average age of these veterans was 38. The average monthly payment was at that time $44.38. Approximately $213,423,000 was paid during the fiscal year to veterans of the World War and to the widows, children and dependent parents of deceased veterans of that war. Of the total number of active compensation awards on June 30, 1931, 62,340, or 20.86 per cent, were for neuropsychiatric disability. Of these, 8.94 per cent were for temporary partial disability, 1.18 per cent for temporary total disability, 4.76 per cent for permanent partial disability and 5.98 per cent for permanent total disability. The neuropsychiatric group contributed 52 per cent of all cases rated permanent and total for all diseases and conditions, and 34 per cent of the sum of all cases rated permanent total or temporary total. The average compensation payment to members of the neuropsychiatric group was $55.86 a month. This average should have been higher, had it not been for the reduction of compensation to $20 a month in 3,909 cases in which mentally incompetent veterans without dependents had been hospitalized by the Veterans' Administration for 6 months or more.

The amendment of July 3, 1930, to the World War Veterans' Act provides, among other things, for the payment of disability allowance to any honorably discharged ex-service man who entered the service prior to November 11, 1918, and served 90 days or more during the World War, and who is suffering from a 25 per cent or more permanent disability not the result of his own wilful misconduct, which was not acquired in the service during the World War and for which compensation is not payable, and who was exempt from the payment of income tax for the year previous to that in which the application for disability allowance was filed. The monthly rates of pay for the different degrees of disability are as follows: 25 per cent permanent disability, $12; 50 per cent permanent disability, $18; 75 per cent permanent disability, $24; and total permanent disability, $40. On June 30, 1931, a total of 541,943 applications had been filed, of which number 448,441 had been adjudicated. Of the total claims adjudicated, $239,073 were allowed and 209,368 were disallowed. The active awards on June 30, 1931, totalled 229,568, while the disbursements for this purpose during the fiscal year amounted to approximately $29,700,000. The awards for neuropsychiatric disability totalled 15 per cent of all the awards, of which 25 per cent received the maximum allowance of $40 a month.

The most significant feature of this legislation is that it represents the first departure in the government's program of veterans' relief from the basic theory that service connection is a prerequisite to the payment of compensation for disabling injury or disease. As a result of this legislation,

a premium was placed on the determination of disability. Observation in hospital provides one index for determining the extent of partial or total, temporary or permanent disability, which a veteran may claim when asking for a disability allowance from the Veterans' Administration. Accordingly there has been a markedly increasing number of admissions to federal hospitals, until at the present time it is impossible to admit all patients applying for general medical and surgical treatment at the hospitals of the Veterans' Administration, and there are waiting lists for admission to the tuberculous and neuropsychiatric hospitals. The tendency for patients to insist upon excessive hospitalization is encouraged by the monetary benefits to be derived through compensation or disability allowance. (The objection by professional groups that this situation leads to discrimination in competition against medical practitioners and institutions appears to apply solely to the general medical and surgical cases and not to the tuberculous or neuropsychiatric groups: Therefore this attitude is not discussed here. Reference is made in this connection, for anyone interested, to the report entitled "Medical Care of the Veteran," made to the Julius Rosenwald Fund, by C. Rufus Rorem, M. D., under date April 15, 1932.)

On June 30, 1931, there were in operation 54 Veterans' Administration hospitals with a combined capacity of 26,307 beds as compared with 47 hospitals and 22,732 beds on June 30, 1930. Two additional hospitals have been opened since that date, bringing the present total number of Veterans' Administration hospitals to 56. This number does not include other government hospitals, or "contract" hospitals, either civil or state, which continue to be used for service-connected cases. Of these veterans' hospitals, 21 are designated as general medical and surgical, 14 as tuberculous and 21 as neuropsychiatric in type. These classifications conform to the type of service for which the greatest number of beds in each hospital are available. For example, if a hospital has 200 beds for general medical and surgical patients, 300 beds for tuberculous and 400 beds for neuropsychiatric patients, it is classed as a neuropsychiatric hospital. During the calendar year 1931, additional facilities for the reception of mental patients were added at the following stations:

Veterans' Administration Hospital	Type of building	Additional beds
Knoxville, Tennessee	Infirmary	147
Augusta, Georgia	Acute service	138
Gulfport, Mississippi	Acute service	138
Ft. Lyons, Colorado	Acute service	138
Camp Custer, Michigan	Acute service	138
No. Chicago, Illinois	Continued treatment	164
Bedford, Massachusetts	Acute service	152
Northport, New York	Group	448
Lyons, New Jersey	Group	465
Perry Point, Maryland	Replacement	146

Additional facilities due to become available for the reception of neuropsychiatric patients in the calendar year 1932, are as follows:

Camp Custer, Michigan	Replacement	27
Augusta, Georgia	Clinical service	211
No. Little Rock, Arkansas	Clinical service	70
Sheridan, Wyoming	General and N. P.	190*
American Lake, Washington	Continued treatment	164
Chillicothe, Ohio	Continued treatment	303
Bedford, Massachusetts	Continued treatment	164
Coatesville, Pennsylvania	Group	465
Canandaigua, New York	New hospital	468
Waco, Texas	New hospital	308†

* Seventy five general.
† Completed.

Since June, 1924, when hospitalization was first authorized for veterans of all wars without regard to the origin of their disabilities, the patient load for the nonservice-connected class has progressively increased. Veterans hospitalized for the treatment of nonservice-connected disabilities as authorized under section 202(10) and remaining under treatment on June 30, 1931, number 18,967 or 54.27 per cent of the total, an increase of approximately 8 per cent since June, 1930. This marked increase is further reflected by an analysis of the 109,649 admissions to all Veterans' Administration hospitals during this year, which shows that over three-fourths of the total number were of the nonservice-connected class. Of the total number, 6123 presented psychotic disorder and 10,542 other neuropsychiatric disorder. It appears that additional hospital facilities will not be required to meet the future needs of the service-connected class as a whole. The most of the pressure for hospitalization at this time is being exerted by veterans suffering from general diseases and conditions (about 75 per cent general medical and surgical, about 10 per cent tuberculous and about 15 per cent neuropsychiatric), which will also be true of the future due to the increase in the number and frequency of diseases and conditions of this type which come with advancing years. There is a relatively high hospital turn-over for the acute medical and surgical cases. Whereas medical and surgical cases comprise three-fourths of the admissions of a year, they represent less than one-third of the cases occupying hospital beds at any one time. There has been a marked and consistent increase in the hospital load of neuropsychiatric cases which should continue for the next 20 years, although to a much less extent than that expected for the general type.

At the expiration of the fiscal year ending June 30, 1931, there were under observation and treatment in all hospitals 35,139 patients whose admissions had been authorized through the World War Veterans' Act of 1924, as amended. This represents an increase of 4598 patients, or 15 per cent over the number of June 30, 1930, and exceeds by 4360 the previous peak load reached in March, 1922. Veterans of the World War comprised 95 per cent of the total hospital load and of these 15,701, or 47 per cent, were receiving

treatment for service-connected diseases; 17,321, or 52 per cent, for nonservice-connected diseases; while 280 were being examined or observed for disability allowance rating purposes. Of the total number of veterans hospitalized, 17,069 were neuropsychiatric patients, of whom 11,386 had service-connected disabilities, 5,189 had nonservice-connected disabilities and 70 were hospitalized for examination or observation for disability allowance. The percentage of World War veterans under treatment for disease or injury determined to be of service origin decreased during the year, while the number of such veterans under treatment for nonservice-connected disease or injury increased 4690, or 37 per cent, since June, 1930. It is expected that the number of service-connected hospitalized cases of both the tuberculous and general groups will continue to decrease because of the comparatively high death rate among pulmonary tuberculous patients combined with the number of cases reaching a state of arrest and consequent discharge from hospitals, and because increasing numbers of general medical conditions due to war service have reached a stationary level and can derive no further benefit from hospitalization. On the other hand, the low death rate among patients with neuropsychiatric diseases and the greater need for continued hospitalization which comes with advancing years, combine to increase the hospital load of this type. At present, Veterans' Administration hospitals devoted principally to the treatment of neuropsychiatric disorders have a complete patient turn-over once every two and one-half years, a very low turn-over as compared with the rapid turn-over of the tuberculous and the general medical and surgical groups.

The extent to which retrenchment in building program will be necessary in face of the existing economic situation is not at present predictable, but should soon become apparent. The Research Department to be set up, according to plan, at Bedford, Massachusetts, for research in mental diseases, had to be temporarily abandoned due to lack of sufficient funds. It was judged that, unless the amount of money available for this activity is made sufficient to carry out the project in an adequate and scientific manner, it might better be postponed to a later date. The Congress had authorized up to June 30, 1931, under eight general acts, the sum of $113,327,000 for new hospital, domiciliary and out-patient facilities, of which $97,450,000 had been appropriated up to that date. In addition, the Congress had previous to that date authorized by special acts the sum of $9,425,000 for new hospital and domiciliary construction at national homes. Further, there had been expended, since 1923, over $14,000,000 from regular fiscal funds for permanent improvements and extensions to veterans' hospitals. The sum of $20,877,000 was authorized on March 4, 1931, to be appropriated for new hospital and domiciliary construction for beneficiaries of the Veterans' Administration, of which amount $5,000,000 was appropriated on the same date. For the entire authorization, it is expected to acquire approximately 6000 beds in veterans' hospitals and 1600 beds in the national homes. Upon completion of the construction to be accomplished under the act of March 4, 1931, and prior acts, there will be in all government hospitals, exclusive of the hospital beds normally required

for the treatment of members of the national homes, a total of over 45,000 beds, or a number sufficient to accommodate both the estimated service-connected and nonservice-connected loads of the Veterans' Administration through the year 1935. It is not believed that, in general, there will be any marked curtailment of treatment methods or services to patients in the Veterans' Administration neuropsychiatric hospitals. The uneven distribution of neuropsychiatric beds over the United States contributes to the difficulties of hospitalization of this group.

Of the veteran population under treatment on June 30, 1931, 74 per cent were in facilities under the control and jurisdiction of the Veterans' Administration; 20 per cent in other government hospitals, and but 6 per cent were in state and civil institutions. 63 per cent of all the patients were hospitalized in their own states. Approximately 60 per cent of those patients hospitalized in state and civil institutions were suffering from neuropsychiatric disorders. Approximately 61 per cent of the neuropsychiatric patients were hospitalized in their own states.

On June 30, 1931, there were 2643 disabled women in receipt of compensation. During the fiscal year ending that date, 856 women patients were admitted to hospitals under the jurisdiction of the Veterans' Administration, or 31 per cent more than in 1930. Of this number, 17 per cent had neuropsychiatric disabilities. During the year, 803 women patients were discharged from hospitals after an average stay of 81 days. Of these, 16 had been treated for psychoses and 97 for other neuropsychiatric disease. On June 30, 1931, there were 294 women patients remaining under treatment in hospital, an increase of 50 over June 30, 1930; 39 per cent were hospitalized for neuropsychiatric disability; 51 per cent were receiving treatment for service-connected diseases or conditions.

Approximately 140,000 veterans received hospital treatment for all diseases and conditions during the fiscal year ending June 30, 1931, of whom 105,159 were discharged after an average of 84.1 days' hospitalization. 14,952 of those discharged had been treated for neuropsychiatric conditions, approximately 30 per cent of these having been treated for a psychosis. Of the total number hospitalized, 56 per cent were reported improved or recovered at time of discharge. The principal psychosis among discharged patients was dementia præcox, there having been 2036 patients suffering from this disease. The largest number of psychotic cases reported recovered was found in the alcoholic group, which formed nearly one-third of the total neuropsychiatric cases discharged. The largest neuropsychiatric group consisted of the psychoneuroses.

The gross expenditure at all hospitals during the year ending June 30, 1931, totalled $38,154,349, while the net operating expenses amounted to $30,414,020. The amount shown for net operating expenses does not include expenses for new construction, nonexpendable equipment, or for the diagnostic center at Palo Alto, California. Throughout this fiscal year there was a daily average of 2160 patients in excess of the average for the preceding fiscal year, and the neuropsychiatric group accounted for 636 of this number. The net per

diem per capita cost for all the hospitals was $3.72. The per diem cost for tuberculosis patients was $5.19; neuropsychiatric patients $2.69, and general medical and surgical patients $4.49. These costs included salaries and fees to all physicians and surgeons, the services of special nurses, and all laboratory and x-ray services, but did not include allowances for interest or depreciation on invested capital, or travelling allowances. These costs as compared with a group of federal, state, county, city, private and diagnostic hospitals, disclosed that, in Veterans' Administration hospitals, the net per diem cost is lower for the general medical and surgical groups, higher for the tuberculous group, and higher for the neuropsychiatric group except lower as compared with private and diagnostic hospitals.

The total expenditures of the government on behalf of all veterans from the termination of the war to July 1, 1931, exceeded $14,000,000,000. The actual net disbursements for all purposes for the activities under the jurisdiction of the Veterans' Administration during the fiscal year ending June 30, 1931, aggregated $787,813,713. Of this amount, the total disbursements for the activities of the former Veterans' Bureau were approximately $512,000,000. The most important item of this expenditure was for military and naval compensation, amounting to approximately $254,000,000. The disbursements for medical and hospital facilities and services were approximately $46,000,000—less than 10 per cent of the total disbursements for the former Veterans' Bureau, but this expenditure should probably exceed $100,000,000 if all veterans seeking hospitalization were treated at government expense. The importance of the item for compensation becomes all the more apparent, when it is stated that the total expenditures for new federal hospitals since 1920 was less than $150,000,000. Since June 7, 1924, when 202(10) cases were first admitted to federal hospitals as patients of the Veterans' Bureau, the Congress has authorized the expansion of existing hospital facilities, apparently in order that all veterans might ultimately receive free medical care under the terms of existing legislation. The benefits of hospitalization are essentially the same at the present time for the veterans of all wars.

Diagnostic centers were established to provide the facilities and staffs of specialists of outstanding reputation, appointed in a consultant capacity, for the reference of problem cases for treatment or determination for adjudication, in which there may have been in the past, or is at the time of the reference, a difference of professional opinion in regard to diagnosis or appropriate treatment. These centers make the final diagnosis in cases which have been the subjects of medical controversy. Four such centers are now in operation at Washington, D. C.; Palo Alto, California; Cincinnati, Ohio; and Hines, Illinois. During the fiscal year ending June 30, 1931, 2814 patients were admitted to these centers. Of this number, 1058, or 38 per cent, were psychoneurotic. Discharges were made in proportion to admissions and, on June 30, 1931, the combined population totaled 260. The average days' residence varied from 12.6 days in one center to 33.5 days in another. Periodic studies of discharged patients have established the value of the superior observational advantages and clinical equipment that these centers afford.

With the present economic situation existing throughout the country, there has not been any difficulty in obtaining a sufficient number of neuropsychiatrists for duty with the Veterans' Administration. It is now the policy to take the younger men as associate physicians and train them along the lines most needed.

The Uniform Veterans' Guardianship Act has been enacted by 34 states to the present time, and some of the other states have enacted legislation which permits satisfactory disposition of mental patients of the Veterans' Administration.

The guardianship load of the Veterans' Administration on June 30, 1931, consisted of 68,327 wards under legal disability, of which number 27,802 were classed as incompetent, and 40,525 as minors. There were, at the same time, 60,650 fiduciaries, of which number 50,011 were guardians of incompetents and minors, 6948 were legal custodians of incompetents and minors, and 3691 were cases in which hospitals were administering funds on behalf of hospitalized Veterans' Administration wards.

On June 30, 1931, monthly installments of term insurance were being paid for neuropsychiatric disability in 5389 cases, or 45 per cent of the total. The termination by death in this group represented but 11 per cent of the total number of deaths. Among policy holders of converted insurance, who were being paid on the basis of permanent total disability, 14 per cent were of the neuropsychiatric group.

The data contained in this report have been obtained largely from the Annual Report of the Administrator of Veterans' Affairs for the year 1931.

GLENN MYERS, M. D., *Chairman*,
ALBERT M. BARRETT, M. D.,
GEORGE M. KLINE, M. D.,
DOUGLAS A. THOM, M. D.,
WILLIAM A. WHITE, M. D.

REPORT OF COMMITTEE ON RESEARCH.

The committee met once during the year, at New York, December 28, 1931.

After some general discussion of the possible functions of this committee, and possible means for their performance, it was considered desirable to arrange for a round table discussion of research problems and methods at the next annual meeting.

The committee wished, also, to emphasize to the membership of the Association the possibilities and responsibilities for specifically *clinical psychiatric* research, although in other years questions relating to laboratory facilities and laboratory activities had constituted the chief, if not the sole, concern of this committee and of its predecessor, the committee on pathological investigation.

To give definite form to this clinical emphasis, two members of the committee were asked to prepare a paper for presentation on the program at the annual meeting. The program committee has cooperated fully with these plans.

If a sufficiently representative discussion is elicited by these means, the committee plans to formulate definite proposals for facilitating the interchange of information and plans among investigators.

Respectfully submitted,

J. C. WHITEHORN, *Chairman.*

REPORT OF THE REPRESENTATIVE OF THE AMERICAN PSYCHIATRIC ASSOCIATION ON THE DIVISION OF MEDICAL SCIENCES, NATIONAL RESEARCH COUNCIL, 1932.

On January 21, 1932, I received, from the President of the National Academy of Sciences, formal notification of appointment to the National Research Council on the Division of Medical Sciences for the period ending June 30, 1934, as representative of The American Psychiatric Association.

On April 28, 1932, I attended the annual meeting of the Division in Washington, D. C.

Of the eleven committee reports which were presented to this Division and approved, two were of considerable potential psychiatric importance, and also represent well the two general procedures followed by National Research Council committees. The Committee for Research in Problems of Sex has served principally as a dispensing and selecting agency for the allocation of monetary grants to individual investigators, but has not defined the problems, leaving this matter to the grantee. During the ten years of its existence, this committee has been very active. It has supported numerous investigations upon the biology and physiology of sex and reproduction.

The Committee on Drug Addiction has formulated a general program and established centers at two institutions (prospectively, also, at a third) with a paid personnel to carry out the program. At the University of Virginia there have been produced more than a hundred different substances, related to morphia, which have been sent to the University of Michigan for pharmacological study. The specific objective is to obtain a drug or drugs with narcotic powers equal to those of morphia, but without habit forming properties. Arrangements have been made for human tests of the most promising products under the supervision of the United States Public Health Service.

The Division also discussed the probable reorganization of the National Research Council, and diminished by five the membership of the Medical Division. In the discussion of reorganization, apropos of the desirability for carefully integrated and cooperative activity, some members inquired why the Committee on Psychiatric Investigation was organized under the Division of Anthropology and Psychology, instead of the Division of Medical Sciences.

It was moved and adopted "that the Chairman be asked to confer with the Chairman of the Division of Anthropology and Psychology to point out that this Division has already expressed itself interested in the line of work which the Committee on Psychiatry is pursuing, and will be glad to cooperate in any way that is acceptable."

While in Washington, I also had two conversations with Professor Madison Bentley, who is chairman of this Committee on Psychiatric Investigation, and discussed the progress of his survey.

I did not bring before the division any specific research projects, wishing first to acquaint myself with the organization and personnel. It would seem desirable, however, to bring to the attention of those of our members who may wish to formulate projects for consideration, the fact that the Association is now officially represented in the National Research Council.

Respectfully submitted,

J. C. WHITEHORN.

REPORT OF COMMITTEE ON PSYCHIATRIC SOCIAL WORK.

Many aspects of psychiatric social work, because of their intimate relation to psychiatry, have a number of problems requiring thorough consideration by psychiatrists. However, the Committee on Psychiatric Social Service believes it inadvisable to attempt to cover in a single report all of the relations of psychiatric social service to psychiatry. It is hoped that the reports of this committee will eventually cover all aspects of psychiatric social work which are of special interest to the membership of the American Psychiatric Association.

In this report we shall endeavor to define what is meant by the terms "psychiatric social work" and "psychiatric social worker." This, we trust will convey to the membership of The American Psychiatric Association some concrete idea as to what psychiatric social work offers to psychiatry and psychiatrists. We also shall discuss briefly certain fundamental precepts concerning the inter-relationship of the psychiatric social worker to the psychiatrist, the standards of psychiatric social work in psychiatric hospitals and the training of psychiatric social workers.

I. DEFINITION OF PSYCHIATRIC SOCIAL WORK.

Psychiatric social work is social work conducted as a part of, an aid to, or adjunct of the specific professional services of a psychiatrist to a patient. Psychiatric social work, through its case work activities, can bring to the psychiatrist much information about the objective relationships of the patient to his past as well as present environment, in its family, school, industrial and community aspects. These data can be satisfactorily obtained only by persons specially trained for this type of work, who, by personally visiting the environment in which the patient has been, are enabled to secure at first hand, the actual facts about the situation. Thus, the social worker not only is enabled to secure for the psychiatrist a description of the patient's reactions to his environment, but what is equally important, a clear picture of the attitudes and reactions of the various personages in the environment toward the patient and toward each other. The psychiatric social worker, therefore, is enabled to render an especially valuable service to the patient by giving

to the psychiatrist an objective picture of the entire setting to which the patient has been attempting to adapt himself and the success or failure of the patient in his adaptations.

Psychiatric social work should not interpret the intrinsic personality problems of the patient but it should be instrumental in furthering a more complete psychiatric understanding of the patient's maladjustment through its interpretation of the social data. On the other hand, the psychiatrist is not secure in his interpretation of the patient's reactions to environmental situations unless he has provided himself with that objective information which a special type of social case work, psychiatric social work, can obtain.

Psychiatry recognizes the need of specialized case work, psychiatric social service, and its value in treatment where social relationships and social adjustments are concerned. Because of the inseparable nature of personality disorders, regardless of their severity or cause, with social manifestations, psychiatric social service is indispensable when the aim is to restore the patient to his maximum level of social adjustment in the community. The social readjustment of patients in the community on a level commensurate with their mental ability includes the establishment of wholesome working relationships between the patient and his immediate group. The psychiatrist makes use of psychiatric social service which, after studying the elements in the total environmental situation, is of assistance through the selection and utilization of all data that will aid the social restoration of the patient and his family to a more satisfactory level of community adjustment.

Psychiatric social case work endeavors to interpret the hospital or clinic and the recommendations of the psychiatrist to the community and to the family of the patient. Psychiatric social case work is concerned with arranging, manipulating and guiding environmental forces through the medium of the worker-client relationship to bring about modifications of attitudes in the social constellation involving the patient. Thus, psychiatric social case work aims to bolster up the weak points in the environment, personal as well as materialistic, and eliminate the undesirable elements. It is to be emphasized that psychiatric social service activities are to be initiated when the patient first comes to the clinic or hospital and some times even prior to this. Much valuable time and many opportunities for constructive work are lost when the assistance of psychiatric social service is postponed until the patient is about to be discharged or paroled.

II. DEFINITION OF PSYCHIATRIC SOCIAL WORKER.

A psychiatric social worker is a person who has acquired a special formal training in case work and mental hygiene and in the particular application of these to psychiatric problems. Such a training offers not only a special knowledge of the social causes, expressions and consequences of personality problems but provides, as well, instruction as to methods for dealing with these by way of social treatment and prevention.

III. FUNDAMENTAL PRECEPTS REGARDING PSYCHIATRIC SOCIAL WORK AND PSYCHIATRIC SOCIAL WORKERS.

1. The Relationship of a Psychiatric Social Worker to the Psychiatrist.

A close coordination of the work of the psychiatrist with the patient and the work of the psychiatric social worker in the community is essential. Many difficulties that arise between the psychiatrist and social worker may be due to an incomplete coordination of their respective, and to some extent, over-lapping activities. The psychiatrist is concerned with the patient as a whole, though perhaps more especially with the physical and mental aspects of the problem. The psychiatrist and the psychiatrist social worker make use of two different techniques, both of which are merged eventually in a more complete understanding and treatment of the patient. The psychiatric social worker is concerned primarily with social analysis, social planning and social treatment.

The psychiatrist often cannot completely understand his patient or adequately treat the problem without the contribution of the psychiatric social worker's resources, nor can the psychiatric social worker adequately gather facts or carry out social therapy without the psychiatrist's interpretation of the patient. It is, therfore, important for the two to work on a definitely cooperative basis with the responsibility for direction invested in the psychiatrist.

2. Standards of Psychiatric Social Service in Psychiatric Hospitals.

Your committee is fully aware of the problems which the various mental hospitals are coping with in their attempts to build up adequate social service facilities. Nevertheless, we believe it wise to recommend certain standards regarding the trained personnel in psychiatric social service, even though the hospitals may be unable to meet such standards for some years to come. It is the opinion of your committee that eventually each mental hospital should have in its psychiatric social service department, such persons as have had a college education or its equivalent and a post-graduate course in psychiatric social work given by a recognized school. Although the personality qualifications for psychiatric social workers are difficult to establish in the sense of standards, nevertheless, it is recognized that poise, tact, sympathy, objectivity, mental alertness and common-sense are highly desirable.

3. Training of Psychiatric Social Workers.

It is not the intention of your committee to discuss this topic in full in this report. However, to the schools giving courses in psychiatric social work we should strongly urge that a reasonable period of actual field work in a psychiatric hospital be required of all students as a part of the course prior to graduation. This, in turn, places a serious responsibility on

our psychiatric hospitals inasmuch as they must be looked to provide adequate psychiatric guidance and proper case work supervision for such student workers as may be assigned to the hospitals by the schools.

HOWARD W. POTTER, *Chairman*,
KARL M. BOWMAN,
GEORGE S. STEVENSON,
J. ALLEN JACKSON,
GEORGE M. KLINE.

REPORT OF THE COMMITTEE ON RESOLUTIONS.

The functions of the Committee on Resolutions have sometimes been twofold, sometimes only onefold. This year they are twofold, namely, first, to bring before the whole Association certain recommendations made in their reports to the Council by the standing committees, and secondly, to express the Association's appreciation of the innumerable contributions to the success of the meeting and to the pleasure of both members and guests which have been made by many persons and organizations.

The Committee on Statistics calls attention to the new Nomenclature of Diseases, nearly ready for publication by the National Conference on Nomenclature of Disease. Our Committee on Statistics has been represented by Drs. May and Shanahan in the Conference, which has incorporated in the new nomenclature the classification of mental diseases and of convulsive disorders which this Association has approved and has been using for several years. Other national special associations have given formal approval of the new classified nomenclature as far as their specialties are concerned, and the Committee on Statistics recommends that this Association do likewise. Your Committee on Resolutions heartily concurs, and recommends that formal approval of the classification of mental diseases and of convulsive disorders as included in the standard classified nomenclature of disease be sent to the National Conference on Nomenclature of Disease.

The Committee on Nursing, supported by the Committee on Medical Services, makes a specific recommendation which should receive the backing of the whole Association. In spite of the fact that this Association is vitally interested in standards of nursing and of Schools of Nursing, it has no representative on the Committee on the Grading of Nursing Schools.

It is a well-known fact that half the hospital beds in this country are occupied by mental patients, and that they all need nursing care. All the mental hospitals feel the need of nurses for this purpose, and a large number of them maintain schools for the purpose of training nurses in the care of mental patients. The fundamentals of nursing are the same for both general and special nursing, but experience in psychiatric nursing can be got only in mental hospitals.

Furthermore, there is a growing tendency to incorporate wards or departments for mental patients in general hospitals, and the general medical profession is coming more and more to recognize the importance of the

mental factors in all general diseases and to appreciate the value of considering them. The need of nurses with psychiatric knowledge and experience will be increasingly felt.

This Association has long had a Committee on Nursing, interested and active in maintaining standards of nursing and of schools of nursing.

Your Committee on Resolutions strongly recommends that this Association express its strong conviction that its Committee on Nursing should be accorded representation on the Committee on the Grading of Nursing Schools.

Your Committee on Resolutions now comes to the happy function of saying "Thank you" on behalf of the Association. Not all of the many persons to whom the Association is indebted can be mentioned by name—it would take hours to merely read the list. But to the Rt. Rev. Francis M. Taitt for his invocation, to his Honor the Mayor, for his message to us, to Dr. J. Norman Henry for his words linking our special work with that of public health, and most especially, to Dr. Henry H. Donaldson for his scholarly and enlightening address on the structure of the organ whose malfunctioning concerns all of us so deeply, the Association is grateful.

To the Chairman of the Committee on Arrangements, Dr. Buckley, and especially, to its ubiquitous and constantly active and helpful secretary, Dr. Maeder, both of whom have contributed much to the integration of our total personality by providing many emotional outlets for our instinctive drives—whether drives on the golf links, drives through the park, or to other places that satisfy the instinct of curiosity, the love of the beautiful or other needs—the Association owes a debt of gratitude. It is also indebted to them and to the ladies who served on the entertainment committee for the many provisions for the occupation, entertainment and comfort of the ladies who have attended the meeting as guests.

To the Program Committee and its competent chairman, Dr. Hamilton, for the intellectual feast of unusual richness which he spread before us in double courses, we are greatly indebted.

To the various institutions, public and private, that opened their hospitable doors to our prying gaze and even furnished transportation to those doors, we extend our hearty thanks.

To the Merion Cricket Club for golf privileges, to the Doctors Golf Association for golf prizes, and to the Mental Hygiene Committee of the Public Charities Association of Pennsylvania for their loan of Dr. Maeder and secretarial service, and for the personal activities of its members, we express the thanks of the Association.

To Mr. and Mrs. Pierre du Pont, who so hospitably opened their home and beautiful garden for the entertainment of the Association, we say a hearty and appreciative "thank you."

To the Chamber of Commerce for its generosity in giving abundant and efficient secretarial service without charge at our registration desk, we wish to express the appreciation of the Association.

Last, but not least, of the management of the Bellevue-Stratford Hotel and its individual employees, we wish to speak with high commendation for their constant helpfulness and courtesies in the many regular services and frequent little emergencies that inevitably arise.

Respectfully submitted,

E. STANLEY ABBOT, *Chairman,*
Committee on Resolutions.

Notes and Comment.

THE NECESSITY OF A CLOSER CORRELATION OF PSYCHIATRIC INTERESTS.—Nothing is more important in our special branch of medicine at this time than a more effective centralization and unification of the activities of the various psychiatric groups. Notwithstanding the prominence and the successful operation of The American Psychiatric Association in this field for nearly a century, there are quite a number of newer organizations which have devoted themselves from time to time to the study of subjects and the promotion of interests which unquestionably belong entirely within the domain of psychiatry. The more prominent of these are: The American Association for the Study of the Feebleminded, The American Psychopathological Association, The Association for Research in Nervous and Mental Diseases, The American Psychoanalytic Association, The American Orthopsychiatric Association, The Central Neuropsychiatric Association, The New England Society of Psychiatry, etc.

There is, of course, no reason whatever for questioning the motives of the founders of these organizations. They have to do, however, with problems which have always merited and received the adequate consideration of The American Psychiatric Association. They are referred to here not in any spirit of criticism, but for the purpose of showing the duplication and diversification of interests which all belong in one group. It is obviously very difficult for those specializing in psychiatry to attend even the annual meetings of these various societies. The time involved and the travel necessary, not to mention the matter of expense, which is an important factor to many, make such an extensive program practically impossible. The fact that there are approximately only 1400 members in The American Psychiatric Association would appear in itself to be sufficient evidence to prove conclusively that there are not enough psychiatrists in this country to warrant the existence of eight or ten different organizations covering the same field. State, district, and other geographical subdivisions of The American Psychiatric Association are perfectly possible, and should be encouraged

where their existence is warranted and desired. The only geographical unit recognized so far is the Massachusetts Psychiatric Society, which has been operated with great success for eight years. There is no reason why there should not be many others.

The Constitution of The American Psychiatric Association makes it possible for those interested to organize sections devoted to the purposes covered by all of the numerous organizations referred to above. There is no reason why they cannot be brought together and constitute component parts of The American Psychiatric Association. This would make it possible for all to attend the meetings of these various groups, which would, under these circumstances, be held in one place and arranged in such a way as to promote the interests of all. The former National Association for the Study of Epilepsy is now a section of The American Psychiatric Association. The revision of the Constitution, which will be submitted to the Association at its meeting next June, will make it still easier to bring all of these organizations together. Every member of The American Psychiatric Association should interest himself in the furtherance of this highly desirable program. Success in this or any other field of endeavor is only to be attained by the united efforts of those vitally concerned.

JAMES V. MAY.

CORRECTION.—In an article by Drs. Adelstein and Carter on "Psychosis: Its Importance as a Presenting Symptom of Brain Tumor," appearing in the September 1932 issue of the JOURNAL, there occurs a misprint on page 318, in which the Norristown State Hospital is referred to as the State Hospital at Harristown, Pa. The same error occurs in item 4 of the appended bibliography (page 328). In view of the importance of the index of 1639 post mortems of mental cases published through the pathological department of the Norristown State Hospital, and to which reference is here made, it is necessary that this correction be recorded.

BIRTH-CONTROL IN MEXICO.—It is reported from Vera Cruz that from November 1, 1932, a birth-control law is effective in that state, as part of a wide reform program in both civil and criminal law. It is interesting to note that this law, which is not merely permissive but mandatory, owes its origin not to medical but to

legal initiative. A year or two ago a congress of Mexican physicians reported adversely on the mooted birth-control legislation.

The purpose of the new law is mainly two-fold: to benefit the poorer classes by preventing parents from having children in excess of the number they are able to support; and to benefit society by forbidding parentage to defective, incompetent and destitute persons. If this law is successful it will control reproduction among those classes which left to themselves are the most prolific and whose increase is least desirable from the standpoint of social well being.

Perhaps the most discouraging feature of the work of physicians, social workers and welfare agencies having to do with indigent families in any community is the realization that one of the major factors in the troublesome and tragic situation lies so wholly beyond control—namely the regularly recurring increase in the number of children. Indeed our sentimental civilization seems to place a premium upon this kind of fruitfulness, and it is natural that the parents of numerous starving children should endeavor to capitalize the fact in their application for charitable aid. A not uncommon example is the ex-soldier of borderline intelligence who has been pensioned for "neurasthenia." Lacking incentive and perhaps capacity for regular work, his hours of idleness are given over largely to physiological processes, of which reproduction is not the least conspicuous. And each new mouth to feed means an increased allowance from the government. The government stands helplessly by. It cannot regulate the philoprogenitiveness of the pensioner; it is as if the pension increase had been "earned." And yet it would seem a matter of ordinary judgment that the state, charged with the welfare of its citizens, might reasonably have something to say about the rate of increase of its wards and dependents.

The experiment in Mexico is radical, almost millennian, its practical operation will be fraught with difficulties, but it will be watched with lively interest. In its eventual working out it may yet point the way to the countries north of the Rio Grande.

Bronze Plaque Unveiled at Testimonial Dinner to Dr. Edmund A. Christian, September 7, 1932.

Association and Hospital Notes and News.

TESTIMONIAL TO DR. EDMUND A. CHRISTIAN.—On the evening of September 7, 1932, professional and personal friends to the number of 150 assembled at dinner at the Hotel Wardell in Detroit to do honor to Dr. Edmund A. Christian, medical superintendent of the Pontiac State Hospital, in commemoration of his seventy-fifth birthday, of fifty years service at the Pontiac State Hospital and of thirty-eight years as medical superintendent.

During the dinner there was unveiled a bronze plaque, reproduced herewith, executed by the eminent sculptor, Carleton Angell of Ann Arbor. This plaque was donated by a small group of Dr. Christian's more intimate friends and associates and will ultimately hang in the Administration Building of the Pontiac State Hospital. There was also presented to Dr. Christian, a gift volume in morocco containing some forty letters of congratulation from his fellow life members of The American Psychiatric Association—men, who, like Dr. Christian, have achieved high distinction in their fields of labor. Among these were letters from Prof. Charles G. Chaddock, St. Louis, Missouri, head of the Department of Psychiatry in the Washington University Medical School; Dr. Bernard Sachs, New York City; Dr. Edward N. Brush, Baltimore, Maryland, Dr. G. Alder Blumer, Providence, Rhode Island, and Dr. Richard Dewey, La Canada, California, editors *emeriti* of THE AMERICAN JOURNAL OF PSYCHIATRY; Dr. Charles W. Pilgrim, New York City; Dr. James V. May, Boston, president of The American Psychiatric Association; Dr. Edward H. Cary, Dallas, Texas, president of The American Medical Association. Cablegrams were received from Prof. Albert M. Barrett of the University of Michigan and Dr. George M. Kline, commissioner of Mental Diseases of the Commonwealth of Massachusetts, both travelling in Europe at this time.

R. G. Ferguson of Sault Ste. Marie, Michigan, chairman of the State Hospital Commission, acted as toastmaster. Responses were made by Governor Brucker on behalf of the state; by Regent

Junius E. Beal on behalf of the University of Michigan; by Dr. Robert L. Dixon on behalf of Dr. Christian's associates in the state hospital service; by Dr. Irwin H. Neff on behalf of the members of the staff of the Pontiac State Hospital, past and present. The address of the evening, "The Durable Satisfactions of Life," was given by Dr. James D. Bruce, vice president of the University of Michigan.

Dr. Edmund A. Christian was born in Detroit, September 7, 1857. He was graduated from the Literary Department of the University of Michigan in 1879 and from the Medical Department in 1882. He received the honorary degree of master of arts from the university in 1906 in recognition of his eminence in his specialty and particularly because of his services to the university in teaching psychiatry up to the year 1906 when was established the State Psychopathic Hospital at Ann Arbor, the first university clinic in psychiatry in this country. In this significant development Dr. Christian played an important part.

Dr. Christian became a member of the medical staff at Pontiac State Hospital in 1882 and continued as an Assistant to Dr. Henry M. Hurd until 1889 when Dr. Hurd left Pontiac to become the first Medical Director of the new Johns Hopkins Hospital at Baltimore. From 1889 to 1894 Dr. Christian was Assistant Medical Superintendent to Dr. C. B. Burr, and when Dr. Burr resigned in 1894 to become the medical director of the Oak Grove Sanitarium at Flint, Dr. Christian succeeded to the medical superintendency at Pontiac, a position he has filled these many years with honor and distinction.

DR. D. K. HENDERSON APPOINTED PHYSICIAN-SUPERINTENDENT OF THE ROYAL EDINBURGH HOSPITAL FOR MENTAL DISORDERS AND PROFESSOR OF PSYCHIATRY IN THE UNIVERSITY OF EDINBURGH.—The choice of Dr. D. K. Henderson as successor to the late Professor George M. Robertson will be a source of satisfaction to the many friends of Professor Henderson on both sides of the Atlantic.

Professor Henderson, after taking his medical degree at Edinburgh University in 1907, spent one year under Sir Thomas Clouston at Morningside before coming to America to work under Professor Adolf Meyer at the New York Psychiatric Institute on Ward's Island, New York City. He returned to the other side to

study under Professor Alzheimer at Munich and Sir Frederick Mott at Claybury. He returned to America to be the resident psychiatrist of the Phipps Psychiatric Clinic of the Johns Hopkins Hospital during its opening years. The war took him back to the other side, and during the war he served with the rank of major in the R. A. M. C. After the war Professor Henderson took a position at Gartnaval Mental Hospital in Glasgow, of which institute he became physician-superintendent in 1921, while at the same time he was lecturer in psychiatry in the University of Glasgow. In 1931 he delivered the Morison Lectures on "Social Psychiatry" in the Royal College of Physicians at Edinburgh. Joint author with Gillespie of the familiar Textbook of Psychiatry, Professor Henderson has made, in addition, a series of contributions to psychiatric literature.

ANNUAL MEETING OF THE AMERICAN COLLEGE OF PHYSICIANS.—Announcement has been made that the American College of Physicians will hold its Seventeenth Annual Clinical Session at Montreal, with headquarters at the Windsor Hotel, February 6-10, 1933.

Dr. Francis M. Pottenger, of Monrovia, Calif., as President of the College, has charge of the program of General Sessions. Dr. Jonathan C. Meakins, Professor of Medicine and Director of the Department, McGill University Faculty of Medicine, is General Chairman of local arrangements and in charge of the program of Clinics. Mr. E. R. Loveland, Executive Secretary, 133-135 S. 36th Street, Philadelphia, Pa., is in charge of general business arrangements, and may be addressed concerning any feature of the forthcoming Session, including copies of the program.

OPENING OF NEW PSYCHIATRIC CLINIC, NEW YORK HOSPITAL.—The New York Hospital, in association with Cornell University Medical College, announces the opening of its new Psychiatric Clinic on October first. The Clinic building, one of the group comprising the new hospital and college at York Avenue and 68th Street, is designed for the treatment of all forms of psychiatric disorders, and for teaching and research. It accommodates 87 adult patients, and 23 children. One floor is given over to laboratories, one to out-patient work, and one to various forms of

therapy. The Clinic, with its staff, including the out-patient service, of nearly fifty physicians, is closely integrated with the other departments of the hospital and medical college. Pursuant to its establishment, the psychiatric teaching curriculum has been greatly extended. The psychiatric department of the New York Hospital was established in 1808, and conducts Bloomingdale Hospital, with its extensive grounds and superior treatment facilities at White Plains.

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Arthur P. Noyes, M. D. (for three years).....Howard, R. I.
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George H. Kirby, M. D. (for three years).....New York, N. Y.
Edward A. Strecker, M. D., 1932-33 (for two years).....Philadelphia, Pa.
C. Macfie Campbell, M. D. (for one year).....Boston, Mass.

Book Reviews.

Conditions and Consequences of Human Variability. By RAYMOND DODGE. (*Yale University Press, 1932.*)

The author, a distinguished American psychologist, summarizes in this small volume his ideas about psychology and the philosophy of science, based on his experiments on knee jerks and movements of the eye muscles, which made him an authority in the field.

Psychology, psychiatry and social sciences have always been scorned by the scientist because they have never developed a satisfactory measuring stick and because the variations of the phenomena which they studied were so large that definite laws could not be deduced with accuracy. The author points out very aptly that there is no such thing as pure constants even in the inorganic world and that the phenomena of variability constantly come up even in such exact sciences as astronomy, physics and chemistry. He agrees that there is tremendous variability in human behavior, but this does not mean that it cannot be a subject of scientific investigation. Studying individual differences one gets a much better idea of the whole than when one attempts to determine the hypothetical constant. "It was a fruitful methodological advance when psychology rescued individual differences from the scrap heap of scientific anomalies and began to study them. At the present time surfaces of frequency and the relative positions of individuals in continuous series express our knowledge of human nature vastly better than the hypothetical 'average man' of a few years ago." The attitude which the author takes is extremely gratifying as it points the way toward the introduction of the scientific method into such phenomena as human thinking, behavior and emotion. If this principle had been understood before, so much of our research in psychiatry which was undertaken with the idea of keeping the hypothetical average in mind would never have been undertaken, as the study of variations is obviously more important.

In a general way the author describes his experiments in studying the influences of the refractory phase on behavior, the influence of relative fatigue, the phenomena of inhibition, the effects of faint stimuli, the development of simple patterns, the problems of interaction of neural strata and the cortical systematization. The author cites his conclusions based on extremely accurate and minute studies of part behavior in animals and human beings, and from these he draws wide generalizations about human nature in general. This latter step is rather unfortunate not because the author's generalizations are not correct, but because the principle is wrong, as it is very dangerous to transfer generalizations from one set of phenomena to a much wider set involving many complex variables. Even Pavlov's results, which are apparently true in the case of dogs, have to be scrutinized before they are applied to human beings.

The dynamic point of view of the author is reflected in his statement that he feels himself a part of the Gestalt movement, a "behaviorist Gestalt," and he takes a very courageous attitude to what he calls psycho-physical parallelism, which is the doctrine that psychological and neural processes run a similar course. He states that this doctrine has proven to be sterile, inhibiting and misleading. "It is unfortunately true, however, that the exact neural processes which are involved in some of the simplest mental acts are still unknown. The neuro-physiology of discriminating red from green, hot from cold, or sweet from bitter is just as obscure as that of remembering yesterday's dictation, the shift of attention from business to golf, and the control of conduct by the intention to be honest. All efforts to picture these mental processes in neurological terms are mere hypotheses, scientific guesses, and should be aimed to arouse investigation rather than self-satisfied belief." This is certainly of encouragement to the psychiatrist, who constantly feels his inferiority in attempting to express the behavior of his patients in exact neurological patterns. The author is unusually broad about the phenomena of consciousness, which he looks upon as a special form of integration. "I can see no intrinsic reason why any stuff in the universe may not enter into a similar kind of organization, if the proper conditions are given."

The material is presented in a succinct, forceful style. It is at times hard reading, as the author makes no attempt to popularize or cheapen his ideas; but the perusal of the monograph will enrich one's point of view and prove again that high thinking has not altogether disappeared from our psychology, even though its students may be steeped in extremely minute and detailed investigations. The book shows the presence of method, the capacity for generalization and criticism which are both instructive and inspiring to the critical student of socio-psychiatric phenomena.

KASANIN.

Neurology—Psychiatry. By PETER BASSOE, M. D., and FRANKLIN G. EBAUGH, M. D. (*Chicago, Ill.: The Year Book Publishers, Inc., 1931.*)

This book, one of the eight volumes in the Practical Medicine Series, 1931, is a digest of the literature for the year in the allied fields of neurology and psychiatry. The character of the book is changed somewhat compared with previous editions. Dr. Bassoe, who formerly edited it entirely, is now assisted by Dr. Ebaugh, who edits the section dealing with psychiatry. This portion of the book has gradually been allotted more space until in the present volume about one-third of the 435 pages is devoted to it.

In neurology the editor notes a continued interest in encephalitis and poliomyelitis with etiology still unsolved. The cause of multiple sclerosis likewise remains undetermined. Several new types of encephalomyelitis, multiple neuritis, arachnitis, leptomeningitis and serum reactions are discussed. More details regarding tumors are recorded and much general information on other neurological subjects is reviewed. The endocrines are included in this section of the book.

In psychiatry the literature has been so voluminous that the editor has found it difficult to make selection of material of practical importance. The

minor and major psychoses receive the bulk of attention, but a considerable portion is devoted to social psychiatry and mental hygiene. A tendency toward a closer relationship between psychiatry and other branches of medicine is noted, and the literature reviewed indicates a growing demand for increased psychiatric instruction in medical schools.

As a reference work on the year's progress in this combined field, the book is highly recommended for hospital or private library.

A. J. KILGOUR,
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The Hygiene of Marriage. By MILLARD S. EVERETT, PH. D. (*New York: The Vanguard Press, 1932.*)

This book is written not by a physician but by an ethicist, and comprises according to the author "a brief and non-technical treatment, within a single volume, of all the topics [relating to marriage] which are of concern to the public, but which are usually treated in separate and often inaccessible works." In the chapters on the anatomy and physiology and physical hygiene of sex, venereal disease and prophylaxis, reproduction and contraception, the author has availed himself of sound medical collaboration; and the information and views he presents can be accepted as reliable and wholesome. The spirit of the book is thoroughly modern and liberal; and while it may be characterized as "a moral treatise in the best sense of the term," as Dr. T. V. Smith, Professor of Philosophy in the University of Chicago, writes in his introduction, we must add the professor's further observation that "more pieties are here dispassionately pierced through and more good sense paraded than one has any right to expect from so small a volume."

The noteworthy thing about this book is that one hundred of its two hundred and fifty pages are devoted to the subject of birth control. Here is a vital issue of contemporary civilization decently, sanely and fearlessly treated. As the author points out, birth control is a fact, widely practised in all parts of the world, whether the constituted authorities like it or not. "The question today has almost become not whether we shall practice birth control, but whether reliable and harmless methods, or unreliable and injurious methods shall be employed." The history of the movement is presented, together with a discussion of the laws relating to birth control in the various states and countries. The methods and technique of contraception are treated in adequate detail, and there is furnished a roster of the various birth control organizations in the United States, with the names of their officers. There is also supplied an alphabetical list by states, with their addresses, of birth control clinics—upwards of 60 in 16 states—actually in operation at the present time.

"The competition in population building," admonishes Sir Arthur Keith, "is more dangerous to the peace of the world than the building of armored cruisers."

C. B. F.

Prospecting for Heaven. By Edwin R. Embree. (*New York: The Viking Press, 1932.*)

This is a curious, entertaining, informative and provocative book. The impressions it creates will be various. There are passages at which the cloistered scientist may wince; the partisan religionist may storm at the low appraisal of his code; the social and economic conventionalists may shudder at the disparagement of their authority; and the thought-free reader will chuckle at their discomfiture.

The author, who is president of the Julius Rosenwald Fund, himself a student of races and an investigator of social and economic problems, presents a symposium, or rather a series of startlingly informal "conversations about science and the good life," in which a psychiatrist, a sanitarian, a psychologist, a Freudian and a sociologist take part along with the author and his *alter ego*, the mythical Chinese philosopher Wu Ting.

The book is frankly propagandistic. Its purpose is to "sell" the social and mental sciences in the sense of applying them, making them work, to do humanity some good. The objective cannot be better appraised than in the words of one of the contributors to the symposium: "In this short volume Mr. Embree adopts a unique and unconventional literary style with the aim of intriguing the reader's interest in a discussion of the mental sciences and their great potential contribution to civilization. Indeed the author's prime purpose is that of evoking more adequate support for these relatively neglected sciences."

The participants in the colloquium are leaders in their respective fields and speak with authority on their subjects. They tell their stories, they criticise each other's views; and the resulting compilation offers a fair sample of what is being said and done in these social welfare sciences and what we may expect from them in their ultimate development.

The history of mental infirmities and what society has done about them is vividly told by Dr. C. M. Hincks, Director of the United States and Canadian National Committees for Mental Hygiene. He sets forth the magnitude of the problem, the real spade work that has been done, the facilities that have been developed, the tremendous needs that still exist, and withal the promising outlook. With his other attainments, Hincks is no mean actor and humorist, and his story of the psychotic foxes (see page 44) is excellent entertainment and drives home a timely lesson at the same time.

The spirit of the symposium being strictly catholic, a Freudian was invited to tell what contribution psychoanalysis had made to social betterment. Franz Alexander, who is described as the "leading Freudian in America," narrates the old familiar story of Sigmund Freud and his work, its kernel of truth and its multitude of vagaries, not omitting even "anal eroticism," and the weird diagram of the "structure of the personality" with its "ego," its "super-ego" and its "id"—a diagram by the way, which changes shape with each exponent. Alexander has somehow got his "super-ego" down at the bottom of the picture instead of at the top where it started and where in all conscience any self-respecting super-ego ought to be. It does not appear from the text that the Alexandrine interlude moved the co-symposiasts

profoundly. "I wonder," enquired Judd, "if the psychoanalysts are in any danger of becoming hypnotized by this picture which they have drawn and to which they have pinned these rather startling names."

Psychology and education are represented by Professor Charles H. Judd of the University of Chicago. His deeply learned chapter on the "Tools of Wisdom" deserves the most careful reading. Here he discusses the origin of speech, writing, number, measure, exchange, and the function of education in its "attempt to give each human being, as effectively as possible, a knowledge of these intricate abstractions which make up human society, and which become more recondite as civilization becomes more efficient."

"The Art and Science of Living Together" is discussed by Professor Howard W. Odum of the University of North Carolina. "Man seems to be about midway between the individualism of birds and fishes and the collectivism of bees and ants. He is constantly demanding personal freedom but at the same time he needs society and needs it abundantly for effective living."

"One of the favorable signs of the times is that we are now beginning to look at other types of social organization not simply to denounce or ridicule them but to understand them and glean from them suggestions for the perfecting of the art and science of living together."

And Odum appears to take no issue with the Chinese philosopher when he states: "By its definition, democracy is government by the stupidest and least responsible. In its practice it is the manipulation of these masses by crafty individuals or vested interests."

A biting chapter for which the symposiarch himself must take responsibility—and credit—is entitled: "Are Morons Sacred?" "We have listened so long to doctors and preachers and politicians that many of us actually believe there is a sacred value to any kind of life so long as it is in a human body. . . . . The theory of most religions is that each individual human being has an immortal soul and that any tampering with life really means taking responsibility for something not only precious but eternal. But of course the preachers refuse to face their own theories honestly. If, as many religions teach, the soul is saved or damned according to its state at the moment of death, then priests should try to see to it that men die at just the instant of their greatest religious experience. . . . . As a matter of fact, religious teachers all over the world are more and more giving up their emphasis on future heaven and hell and are becoming increasingly concerned with a good life on earth."

In a later chapter Embree returns to this issue of life. "Modern medicine has prolonged and invigorated life prodigiously; but conservative society expects us to go right on bearing children at the same old rate. We all feel that it is right to limit the outgo of life, but we are squeamish about regulating the intake . . . . ! Church organizations and conservatives generally seem to feel there is something holy about having babies, regardless of whether these children have any chance of growing up in a decent and human fashion or even of growing up at all. . . . . The opposition to birth control goes beyond any special vested interests. It is a part of that social

inertia which keeps us worshipping a habit which for ages represented a racial necessity but which is now no longer needed, is in fact positively harmful."

This book is a challenge to the mental and social sciences to get together and do some team-work in the field of every day life. Its *leit motif* is that the mental sciences, like other human welfare disciplines, should not make the amelioration of morbid or defective lives their exclusive or even their chief goal. Health agencies, mental hygiene, education are for the masses to be sure; but human betterment lies in the direction not of saving the weak but of cultivating the strong, not of patching up the defective but of reinforcing the superior types, not in the number of lives and their prolongation at all costs but in the quality and fulness of life of those who are capable of richer development.

Utopian? Perhaps; but there is constructive thinking based on experience, and better still there is vision, without which, we are told, the people perish.

C. B. F.

Mental Healers. By Stefan Zweig. Translated by Eden and Cedar Paul. (*New York: The Viking Press, 1932.*)

This is the fourth volume in the author's series: "Master Builders," the first of which appeared in German in 1919 (English, 1930), and dealt with three great literary characters of the nineteenth century, Balzac, Dickens, Dostoeffsky. The second volume of the series (Nietsche, Kleist, Hölderlin) was published in 1925, and the third (Casanova, Stendhal, Tolstoy) in 1928.

The present volume offers vivid portrayals of three great characters in the modern epoch of mental healing—Franz Mesmer, Mary Baker Eddy, Sigmund Freud. At first glance it is rather startling to see the name of Freud, whom many disciples regard as the source of ultimate psychological wisdom, linked with those of two by-gone celebrities of somewhat questionable repute—the one, a faith healer whom his contemporaries and history have looked upon as a charlatan; the other an opportunist psychopath who out of an iron will, a shrewd single track brain innocent of logic and without a vestige of heart or soul, or even conscience, manufactured a new religion.

We must hasten to say that Zweig means no discourtesy to Freud by this association; indeed he is obviously under the spell of the father of psychoanalysis. "What was psychology before Freud," he cries. "An academic specialty, encapsuled in seminaries, lost between the covers of ponderous tomes penned in an unintelligible jargon." The sequel suggests itself. Accept it who will. The psychology of today is not the psychology of the eighteen-eighties and nineties to be sure. Its evolution has been as natural and as inevitable as that of other sciences—and no more radical or startling. In this development many distinguished names have appeared. But it is a habit of Freudians to attribute the "reformation" of psychology to their master alone, or practically so. Here is *post hoc propter hoc* with a vengeance.

But the book is delightful reading; and we are constantly reminded that the author is a writer of romance as well as biography. He has taken as the

leading exponents of psychic or mystic healing during the past two centuries three personages who created the greatest sensation in their times, about each of whom raged long and bitter strife.

Mesmer (1753-1815) stands at the beginning of the modern period. Indeed as Zweig puts it, "He it was who discovered psychotherapy. For all the recently opened domains of psychology—hypnosis, suggestion, Christian Science, psychoanalysis, and even spiritualism and telepathy—are to be found in that new continent which this tragically neglected man discovered unwittingly." Tragic indeed was the life of Mesmer. Denied honor, even respect, during the greater portion of his later life, driven out of Vienna and later quitting Paris under a cloud, he finally died in relative obscurity. His methods savored of magic or hocus-pocus, but he obtained cures; and twentieth century medicine owes to him more than it commonly realizes or perhaps likes to acknowledge.

For centuries the magnet had been considered to possess mystical powers, drawn possibly from the stars. "I am convinced from my experiments," Paracelsus had declared, "that the magnet contains mysterious properties of so potent a character that one cannot dispense with it in the treatment of disease." Chance observation brought to Mesmer's knowledge a striking cure effected by the application of magnetized iron. He repeated the experiment and found that it worked. "Within a year Mesmer's triumph was complete; he could rest content. An academy, a dozen or more doctors, and hundreds of cured and enthusiastic patients, had testified to the efficacy of the magnet as a means for restoring health." Soon, however, he realized "that not the magnet but the magnetizer was the wizard who restored health." He discarded the lifeless metal and produced equally miraculous cures merely by the laying on of hands. "Magnetism" had become "animal magnetism" which is "Mesmerism." Said Mesmer: "Of all bodies in nature, none is so potent in its influence upon man as is the body of man himself." And this statement stands good as the text of psychotherapy today.

It was in Paris that his supreme triumph came. "Gradually a belief in the magical influence of Mesmer's person gained ground and assumed the proportions of religious mania, so that he came to be looked upon as a saint by the multitudes his methods had cured. If he went for a stroll, he would be beset by people who wished merely to touch his clothes. . . . . There was a sort of collective frenzy, of universal hysteria. Every one suffered from mesmeromania."

And then the débâcle. The Paris Academy of Medicine and the Academy of Science discredited Mesmer and his work. The craze had passed.

To this intensely dramatic life the author does full credit. He rehabilitates Mesmer, if that were necessary, and shows how later and contemporary movements in psychotherapy must go back to him for their starting point. "Before Mesmer, no properly trained and accredited modern physician had understood and utilized with full awareness the healing power which a suggestive personality, its proximity, words, persuasion, commands, can exert for curative purposes upon the sick."

"Mary Baker Eddy would never have been able to found her doctrine of Christian Science except as an offshoot of mesmerism—although the demonology into which mesmerism ultimately developed in her disordered mind was to plague so many of the closing years of her life." Zweig traces with unsparing epithet the somewhat unsavory career of Mother Eddy. He speaks of the "almost infinitesimal grain of intelligence" which launched an avalanche. "In twenty years out of a maze of metaphysical confusion she created a new method of healing; established a doctrine counting its adherents by the myriad, ... and won for herself private wealth amounting to three million dollars. . . . . By her very exaggerations she gave contemporary psychology a vigorous forward thrust, and ensured for herself a special page in the history of mental science. In the breadth of her influence, in the swiftness of her success, in the number of her supporters, this old woman, scarcely more than half-witted, always ailing, and of very dubious character, outstripped all the leaders and investigators of our time."

The foregoing statement we must reluctantly admit to be true. A comparison of the personalities and careers and finales of Mesmer and Mother Eddy furnishes one of the supreme ironies of history. Mesmer was everything which Mrs. Eddy was not—cultured, highly intellectual, learned in science, philosophy, theology and law, with the mind of an artist, a lover of music, socially well placed, of sound health and princely presence, and withal sincere, kindly, philanthropic—and he passed into total eclipse. Mrs. Eddy climbed to the pinnacle and stayed there, and there she died and became at least a demi-divinity; and her religio-therapeutic doctrine goes marching on.

In Freud we encounter again, as in Mesmer, a human personality and an extraordinary intellect. The author writes of him with intimate knowledge and as an enthusiastic disciple. Being too near he has not the same perspective as in viewing Mesmer; certainly his discussion of Freud is vastly less judicially critical. Indeed, it is hardly critical at all. Zweig presents authentically the Freudian system which he regards in all essentials as questionless truth. The reader will notice this difference in treatment as he passes from the sections dealing with Mesmer and Eddy to this closing portion of the book.

This difference is offset however, by the mere juxtaposition of the three names—Mesmer—Eddy—Freud. Mesmer was the fountain head, Eddy and Freud, in the author's view, the two biggest streams which flowed therefrom. And one quality is common to the three. Whatever their personalities, their characters or their motives, whatever the soundness or fallacy of their individual doctrines, all have borne witness to the potency and utility of suggestion whether they admit it or not, or by whatever name they call it. Whether much or little of their teaching survives, the "vigorous forward thrust" which by their very exaggerations and grotesqueries each of these three has given to that spirit of inquiry which has ensured our growing knowledge of psychogenesis and psychotherapy, will remain their enduring credit.

The Viking Press has given to a notable work a distinguished dress. The English text reflects the usual excellence of the translators, Eden and Cedar Paul.

C. B. F.

Twenty-Five Years. A Memorial Volume in Commemoration of the Twenty-Fifth Anniversary of the Vineland Laboratory. Edited By EDGAR A. DOLL, PH.D. (*Publication of the Training School at Vineland, New Jersey, 1932.*)

In September, 1931, the Vineland Training School celebrated its silver anniversary. At the regular autumn meeting of that year a special programme was arranged which should take stock of the results of twenty-five years of research at this remarkable human laboratory into the problems of mental deficiency. This splendid memorial volume is the result. It records the story of achievement which transformed "a small institution in South Jersey, in a little town, practically unknown," as Professor Johnstone, director of the Training School, remarked in his opening address, into a research centre of world-wide fame. The story of Vineland recapitulates the history of the scientific study of feeble-mindedness on this continent.

Johnstone, discussing "The Institution as a Laboratory" passes in review the early days, just at the beginning of this century. A new step had been taken in education—special classes for backward pupils, then generally believed to be merely slow in learning. Early experiments demonstrated the kinship of many of the children in these special classes, with the training school children recognized as defective. In 1904 was organized the first training course for teachers of special classes in public schools. This course has continued at Vineland to date. Between fifty and sixty teachers are trained each year.

Then came the question of establishing a laboratory. Johnstone consulted G. Stanley Hall who nominated Goddard; and in 1906 Goddard came as first Director of Research.

Gesell recalls for our information the origin of the word "moron." In 1910 Fernald was chairman and Goddard was a member of the Committee on Terminology of the American Association for the Study of the Feeble-Minded. "Goddard at first suggested the adoption of the British usage of the term *feeble-minded* to designate the highest grades of mental deficiency. Since, however, the term *feeble-minded* was, in this country, traditionally used in a broad and inclusive sense, Goddard fell back on his knowledge of Greek, gave the Greek word for 'fool' a neuter variation, and launched his suggestion of the term *moron* in the report on terminology. The report was tentatively adopted and has never been rescinded."

Doll, the present Director of Research, reviews the outstanding accomplishments of the Vineland laboratory—the early study methods of Goddard, the advent of the Binet-Simon scale (1905, only one year before the Vineland Laboratory was established), its first translation and use at Vineland in 1908 (the year of the first edition of Tredgold's *Mental Deficiency*), the standardization of the Binet scale on 2000 Vineland public school children in 1911, the establishment of research divisions in biochemistry and neuropathology in addition to psychology, the investigation of heredity (discovery of the Kallikak family), and other etiological factors, the elaboration of general ability tests (Goddard formboard, Porteus maze), and perhaps more important than all, the training of hundreds of research students and professional workers who have spread abroad the principles and methods of the Vineland Laboratory.

With regard to sterilization Doll is quite definite. "The study of heredity as a cause of mental deficiency has clearly indicated the importance of sterilization as a method of prevention." Here is the studied conclusion of a competent authority.

The principal address of this symposium was made by Goddard himself, the guest of honor. Here are some of the more striking and significant passages:

"I think we may say that from a state of nearly complete ignorance and lethargy, where only the people who were in direct contact with them even knew that there existed such human beings as idiots or imbeciles, where more than half of our commonwealths had no provision for such persons, we have advanced to a situation where *every* state has its institution for the feeble-minded, or at least takes care of its most serious cases. Today it is an ignorant person who is not aware of the problem of feeble-mindedness.

"If only a relatively small number of school systems have special classes for the backward and feeble-minded children, and if not one system makes *adequate* provision of this sort, at least it is a very poorly trained teacher who does not know that the pupil who cannot keep up with the class is possibly feeble-minded.

"This, in itself, is a great gain. Perhaps it is as great a gain as we ought to expect when we realize that nature's is the slow, safe and sure method of *evolution*, rather than *revolution*, which is fraught with danger and uncertainty.

"Mental testing is more extensively used today in the United States than ever before. It is more true than ever that mental tests are marvellously accurate, although they have been severely criticized by critics—honest, intelligent, sincere and otherwise. Mental testing is carried on in Hungary, Austria, Germany, Italy, Switzerland, England and Russia, though nowhere to the extent that it is practised in the United States.

"From a social standpoint, the curve of distribution of intelligence, as determined by the Army Mental Tests from the testing of 1,700,000 men, is probably the most valuable piece of information that mankind has ever acquired about itself.

"We know now that the so-called civilized nations are made up of people of a wide range of capacity and, consequently, of responsibility. One half of the world has not the intelligence, the capacity, to become even interested in the great social problems. It requires the entire mental energy of these people to get enough to eat, clothes to keep them warm, and automobiles to transport them.

"The very serious problems that are confronting us right now in unemployment and the consequent poverty and starvation are to a very large degree due to the fact that the great mass of these people have not had the intelligence and foresight to save some of their earnings, when they had employment at good wages, in anticipation of just such difficulties as they are now facing. *It is perfectly clear to those who understand this situation that half of the world must take care of the other half.*

"It is unimportant, from a practical standpoint, whether the percentage of hereditary feeble-mindedness is 50 or 65 per cent, unless we are going to

take the whole problem more seriously than we have ever done. But in the interest of scientific truth I see no reason to throw away the evidence we have for 65 per cent and adopt a mere guess of 50 per cent.

"One of the principles emphasized at Vineland in the early days was that every feeble-minded child is a *potential* criminal. Perhaps no one utterance of ours has caused more comment or more heated arguments. *Every feeble-minded child is a potential criminal.* The only criticism that can possibly be made of that statement is a rhetorical one. Taken as it stands, it means nothing. It is quite evident that every normal child is also a potential criminal.

"What the sentence was intended to imply and what it does imply is that a feeble-minded person is *more liable* to become a criminal than is a normal person. Can anyone safely deny that? It is unthinkable that a group of people who are noted for their lack of will power, for their easy morality, for their lack of inhibitions, should not be found violating the laws more often than a group of normals.

"But we are not confined to theory. We have the facts. They *do* commit misdemeanors and crimes more often than do normals.

"This leads to another disputed topic: the percentage of criminals who are feeble-minded. We never attempted to do more than make a guess that this percentage was from 50 to 80 per cent. Today we have divided the group that formerly was classified as feeble-minded into the feeble-minded and the psychopathic.

"Our experiences at the Ohio Bureau of Juvenile Research gave about 66 per cent in two groups. That is, 'between 50 and 80 per cent.'

"David Starr Jordan has well said, 'In human life there is no substitute for intelligence.' Man has constructed a great social order. He has established great institutions and complicated relationships. The question now is: Have we intelligence enough to keep them going?

"The World War reflected an appalling lapse of intelligence. Either there was not sufficient intelligence to prevent it or we had so badly organized ourselves that our intelligence could not function in such a situation."

The great menace to civilization, Goddard never ceases to point out, is what William Allen White denominated as "the moron majority." One half of the population of the world has not the intelligence and capacity to do much more than secure the rudimentary needs of their physical existence. They have not the "responsibility" of the superior types. These are the cases in the broadest sense, quite specifically the more definitely defective, which must be studied and dealt with if society is to be improved. "Just as the mosquito was the key to the malaria problem, so are the feeble-minded the key to the great social problems of the present."

The volume closes with a list of the personnel and publications of the laboratory during the period 1906-1931. The bibliography occupies twenty-four pages. The enquirer who would orient himself in the whole span of the scientific study of mental deficiency can do so by perusing the hundred and thirty-five pages of these "Twenty-Five Years" of the Vineland Laboratory.

C. B. F.

In Memoriam.

ANNE T. BINGHAM.

Dr. Anne T. Bingham, psychiatrist on the staff of the Home Office, the medical division of the Metropolitan Life Insurance Company, died at her home in New York City, May 20, 1932, just seven hours after the death of her mother in Watertown, N. Y. Her father, Charles D. Bingham, former mayor of Watertown, died only three weeks earlier.

We are permitted to republish the following paragraphs from a memorial sketch of Dr. Bingham, which appeared in the *Home Office*, the official publication of the Metropolitan at the head office of the company:

Dr. Bingham had been seriously stricken with heart disease in February and had been on leave of absence since that time. She had, however, shown great courage and patience in her endeavor to recover her health and seemed to be making progress. It is thought the shock of the loss of both parents tended to hasten her death.

A double funeral for Dr. Bingham and her mother was held privately at the Watertown home on Sunday evening, May 22.

Dr. Bingham was an able, energetic physician of the highest order. She was born in Watertown, N. Y. After graduating from Syracuse University Medical School in 1900, she interned, in a hospital in Detroit, Mich., leaving there in 1901. Following this, she practiced medicine in Albany for some three or four years and then in Watertown.

From 1906 to 1911, she was resident physician at the State Training School for Girls at Hudson, N. Y.

In 1912 and 1913, Dr. Bingham was Inspector of State Hospitals and from 1913, until coming to the Metropolitan in 1926, she was psychiatrist at the Girls' Service League. During this time she served as visiting psychiatrist at Washington Irving High School, Erasmus Hall and Wadleigh High Schools. This period was interrupted, however, in 1919, when she served for nine months on the house staff of the Henry Phipps Psychiatric Institute at Baltimore, Md.

At the fifteenth aniversary of the founding of Phipps Psychiatric Clinic, Dr. Bingham read a paper in which she told interestingly of the psychiatric service of the Metropolitan in which she was so deeply interested and carried on so successfully.

Dr. Bingham was a member of the American Medical Association, the Academy of Medicine, The American Psychiatric Association and the Society for Clinical Psychiatry. She was also a member of Kappa Alpha Sorority and the National Arts Club.

Dr. Bingham did excellent work among Home Office employees and visiting employees from the Field and she was in all respects a remarkable addition to the Home Office Medical Staff.